# NEW REMEDIES

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# NEW REMEDIES.

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## MATERIA MEDICA.

### Indian Medicinal Plants.

SURGEON B. EVERS continues, in the *Indian Medical Gazette* for October 1, his notes on Indian medicinal plants as follows:

*Soymida febrifuga* (N. O. Meliaceæ).—The plant is commonly known as "Bastard Cedar" and "Indian Red-wood" in English, and as "Rohun" in the vernacular. It is common in Central India. The wood is of a red color, strong, heavy, and durable, and well adapted for building purposes and for making articles of furniture; it is not readily attacked by white ants. The bark, according to Ainslie, is "of a dingy red color, and has a pleasant bitter taste, with a slight degree of austerity." (A decoction of the bark dyes brown of various shades.) Both the decoction and the infusion of the bark are used in medicine; but the tincture, according to the authority named, is said to be the most valuable. The Baids employ the bark in the treatment of malarial fevers, thus; Six mashas (equivalent to a drachm and a half) of the bark are bruised and administered in combination with sugar or syrup, two or three times a day. It is considered by some as a good substitute for cinchona bark. Sir W. O'Shaughnessy, however, is of opinion that it is of little use "in the treatment of obstinate or dangerous cases," but that "like all other astringent tonics," it will often succeed in mild cases of ague. He recommends it to be given in the form of extract. Attempts have been made to obtain an alkaloid principle from the bark, but without success. The spicular crystals obtained when the bark was subjected to processes similar to those for obtaining sulphate of quinia, were found to be simply crystals of sulphate of lime. It is sometimes adulterated with nux vomica bark, but from this it is distinguished by the application of nitric acid; the acid when applied to the inner surface of soymida bark does not "cause a bright red stain." Waring recommends it as a good substitute for oak-bark when astringent gargles, injections, etc., are required. I have employed the bark in the treatment of ague, but cannot report favorably of it. Its action appears to me to be more that of a bitter tonic than a febrifuge. In overdose, it is said to cause derangement of the nervous system, "occasioning vertigo and stupor." The bitter principle of the bark, according to Broughton, consists of an almost colorless resinous matter sparingly soluble in water, "but more so in alcohol, ether, or benzol." It does not combine with acids or bases; it contains an abundance of tannic acid.

*Anthocephalus cadamba* (N. O. Rubiaceæ: vernacular, Kaddam).—The plant is common in Bengal and in the North-West Provinces; seldom seen in the Central Provinces. It is said to be indigenous to Assam. "The flowers are offered in Hindu shrines; the fruit is eaten." I have employed a decoction of the bark (prepared in the same way as decoction of cinchona) in the treatment of ague, but cannot certify to its efficacy as a febrifuge. In several trials I gave it, it appeared to me to act simply as a tonic.

*Euphorbia antiquorum* (N. O. Euphorbiaceæ).—According to Ainslie, "the milky juice got by wounding the branches is extremely corrosive, but when boiled with a small quantity of gingilie oil (tin oil) the native practitioners use it as an external application in rheumatic affections;" it is said also to deaden the pain of toothache. When administered internally it acts as a cathartic, and is considered to be specially useful "in those cases of obstinate constipation which are often troublesome when there is an enlargement and induration of the spleen or liver. The fresh juice is highly acrid. The Baids and Hakeems seldom use it fresh. For ordinary blistering purposes it is combined with croton-oil, thus: The juice is mixed with bruised croton-seeds, saffron, and butter; this mass is enveloped in three or more folds of calico, and fastened to the end of a long iron hook; the mass is then ignited and held over some vessel, when a dark oily liquid is obtained; this liquid is said to be powerfully caustic. As a purgative, the juice is administered thus: Two or three drops of the fresh juice are mixed with about half a drachm of roasted chenna (Bengal grain) powder, and a little ghee and sugar; this dose is considered sufficient to produce eight or ten copious evacuations. The inspissated juice was formerly held in great repute as an antisyphilitic, and indeed Dr. J. Shortt reports that he has found it an excellent alterative in these cases, in doses of five grains night and morning. For a long time it was supposed that this plant was the source of the euphorbium of the shops, but this has been disproved by Hamilton (*Linn. Trans.*, vol. xiv.) and Royle (*Illust.*, vol. i., p. 328). Flückiger and Hanbury refer euphorbium to the *Euphorbia resinifera*. A plaster composed of the bruised roots and assafœtida is applied to the stomachs of children suffering from worms. The root-bark is said to be purgative. The resin in combination with cantharides forms gout-plaster. The *Euphorbium tirucalli*

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and *E. nivulia* also yield an acrid milky juice. All these plants are of a highly poisonous character, and great care therefore is necessary in employing them medicinally.

*Zizyphus jujuba* (N. O. Rhamnaceæ: vernacular, Bair).—A very common plant in the forests of Central and South India. The bark is used as a dye, and also for tanning; the root is considered a febrifuge by the natives, and oil is obtained from the kernels. O'Shaughnessy states that "the bark is used in the Moluccas as a remedy for diarrhœa; the root with some warm seeds in infusion, in fever. The lozenges, and the thickened mucilage called *jujube*, by the confectioners, are prepared from this, and the *Z. vulgaris*." Pieces of the roots, threaded into a necklace, are worn by the natives during attacks of ague. I have tried the root as a febrifuge, but find it slow in its action. In seventeen cases treated with a decoction of the root, the drug did not check the paroxysms until about the seventh or eighth day; I believe it acts more as a tonic than an antiperiodic.—*London Medical Record.*

### Cardamoms.

Cardamoms form an important product of the hill districts of India, chiefly on the western slopes of the mountains of Coorg and Mysore, at an elevation of from 2,500 to 5,000 feet above the sea. In February the cardamom-growers proceed to the forests and mark one of the largest trees on the steepest declivity. The ground at the foot of the tree is cleared of brushwood, and the tree is felled at about twelve feet from the ground. It falls down the side of the mountain, head foremost, carrying a number of smaller trees with it in a great crash. Within three months the cardamom plants begin to show their heads all over the cleared ground. During the rains they grow two or three feet, and twenty months after the felling of the tree, when the cardamom plants are the height of a man, the ground is thoroughly cleared of weeds. In the following April the fruit-bearing branches shoot forth and become covered first with clusters of beautiful flowers, and then with capsules. In the following October the first crop is gathered, and the harvests continue good for seven years, when they fall off. Then another giant of the forest is felled, and the process is renewed. The gathering in, entailing a walk of several miles through wet underwood, covered with leeches, is very hard work. In Coorg, the cardamom forests are rented out for £3,000 a year. Instructions were given in 1871–72 for the demarcation of such tracts of jungle as were favorable to the growth of this spice, and coffee-planters are beginning to turn their attention to its cultivation. With regard to the desirability of endeavoring to get the cardamom plant to bear on long floriferous stems rather than on the natural short underground shoots that at present produce the seeds, it must be remembered that this particular habit forms the great and remarkable physical difference between the gingers and the cardamoms, and that it is no more likely that this natural habit can be changed by taking "thought," than it is that mangoes can be got to grow like jacks on the parent stem by a like process. Attention has lately been drawn in the Indian papers to the desirability of encouraging and extending the cultivation of cardamoms, on the grounds of its facility, and that although the demand for the spice in Europe is generally limited, yet that there is a very fair consumption of it in Eastern countries and also in European Turkey. Even in India, the consumption of cardamoms by the natives is but limited. They chew it with "betel" but slightly—perhaps if the price were reduced they might use it more—and they also use it medicinally in a small way, as Europeans do. With regard to its officinal use—in the curry, for instance—a very few seeds will go a very long way with them, and certainly no European could stand more than one or two in his curry—to which, however, they are a very pleasant adjunct. In Travancore the monopoly is rigorously enforced, but instead of selling the right to collect the cardamoms to farmers or contractors, the Sicar reserves to itself the right of purchasing, at a price fixed by itself, all the cardamoms grown throughout the whole range of hills within the province. Formerly the Travancore Government used to take what crops they could get by the above system; some years aggregating from 500 to 600 caddies, or from 5,000 to 5,500 cwts., the entire crop being collected at Allepee, which is the emporium for cleaning, dressing, and assorting the produce prior to the annual sale by auction, which is held by the commercial agent about April in each year. During the last few years, however, the Travancore Sicar has appointed an European superintendent of their cardamom hills, and he has been extending the cultivation considerably, but whether any improvement will take place in the actual working of the system generally under a purely native government is very doubtful.—*Jour. of Applied Science.*

### Doctor Warburg's Tincture.

In *The Lancet* of Nov. 13, Prof. W. C. Maclean, of Netley, England, gives the formula for the preparation of this remedy, and adduces considerable proof of its efficacy in malarial fevers. Until recently this has been, for many years, a secret remedy, but, acting on the advice of his friends, Dr. Warburg confided the formula to Professor Maclean, who has verified it by making thirty ounces of the tincture in the Netley laboratory. Several striking examples of the value of the remedy in the remittent fevers of India are mentioned, and Professor Maclean says further: "To the best of my knowledge Warburg's tincture was first introduced into Southern India, for use on a large scale, by the late Lieutenant-General Sir Mark Cubbon, K.C.B., Commissioner of the Mysore Province. . . . Having himself used the remedy with success, he at first placed five

hundred, and subsequently one thousand, bottles of it at the disposal of the late Dr. C. J. Smith, well known as surgeon to the Mysore Commission (much exposed to malaria in the discharge of their duties), and I believe I am right when I say that none of them ever ventured into a malarious locality without being armed with a little bottle of 'Warburg.' . . . . . .

"I have not space at my command to say more of its use in Southern India, where it was always better known and more used than either in the Bengal or Bombay Presidencies. Many great engineering works in Southern India, carried on in 'deadly jungles,' were brought to a successful issue mainly by the protection afforded to the workmen by this medicine. Some remarkable evidence on this point was placed before the Royal Commission which inquired into the health of the Army of India, by my friend Major-General Cottin, R.E.

"I have only to add that many very eminent members of the profession in this country, among whom I may instance Sir Andrew Halliday, the late Sir James Gibson (Director-General of the Medical Department of the Army), the late Dr. Babington, Mr. Skey, and many others, were led to use this febrifuge, and have left on record strong evidence of its value as a therapeutic agent. . .

"It will be seen that quinine is the most important ingredient in the formula, each ounce bottle of the formula containing nine grains and a half of the alkaloid. Its presence has been detected by every chemist who has attempted its analysis, and never doubted by any medical man of experience who has used the tincture. Many will say, 'After all, this vaunted remedy is only quinine concealed in a farrago of inert substances for purposes of mystification.' To this my answer is, I have treated remittent fevers of every degree of severity, contracted in the jungles of the Deccan and Mysore, at the base of mountain ranges in India, on the Coromandel coast, in the pestilential highlands of the northern division of the Madras Presidency, in the malarial rivers of China, and in men brought to this hospital from the swamps of the Gold Coast, and I affirm that I have never seen quinine, when given alone, act in the manner characteristic of this tincture; and although I yield to none in my high opinion of the inestimable value of quinine, I have never seen a single dose of it given alone, to the extent of nine grains and a half, suffice to arrest an exacerbation of remittent fever, much less prevent its recurrence, while nothing is more common than to see the same quantity of the alkaloid in Warburg's tincture bring about both results." . . . . . .

The rules for the use of the remedy, as given by Dr. Maclean, are as follows: "One-half ounce (half of a bottle) is given alone without dilution, after the bowels have been evacuated by any convenient purgative, all drink being withheld; in three hours the other half of the bottle is administered in the same way. Soon afterwards, particularly in hot climates, profuse, but seldom exhausting, perspiration is produced; this has a strong aromatic odor, which I have often detected about the patient and his room on the following day. With this there is a rapid decline of temperature, immediate abatement of frontal headache —in a word, complete defervescence, and it seldom happens that a second bottle is required. If so, the dose must be repeated, as above. In very adynamic cases, if the sweating threatens to prove exhausting, nourishment in the shape of beef-tea, with the addition of Liebig's extract, and some wine or brandy of good quality, may be required."

### "Dr. Warburg's Tincture.

"℞ Aloes (Socotr.) libram,
Rad. rhei (East India),
Sem. angelicæ,
* Confect. damocratis, ana uncias quatuor;
Rad. Helenis (s. enulæ),
Croci sativi,
Sem. fœniculi,
† Cret. præparat., ana unc. duas;
Rad. gentianæ,
Rad. zedoariæ,
Pip. cubeb.,
Myrrh. elect.,
Camphoræ,
‡ Boleti laricis, ana unciam.

"The above ingredients to be digested with five hundred ounces of proof spirit in a water-bath for twelve hours; then expressed and ten ounces of disulphate of quinine added; the mixture to be replaced in the water-bath till all quinine is dissolved. The liquor, when cool, is to be filtered, and is then fit for use."

### Bromide of Eserine.

M. DUQUESNEL has been able to obtain a bromide of eserine, the alkaloid of Calabar bean, which promises to supplant some of the other salts, inasmuch as he has been able to crystallize it, and its neutral solution possesses the property of contracting the pupil. The other salts, it is well known, have not been crystallized, and are apt to be acted upon by the atmosphere. They are, in fact, yellowish, or reddish amorphous deliquescent masses, the sulphate being the most commonly used. M. Duquesnel's crystals keep in the air without alteration, are perfectly soluble in water, and the solutions are neutral to test-paper. They may, therefore, be advantageously substituted for the sulphate.

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* This confection, which consists of an immense variety of aromatic substances, was once officinal, and is to be found in the Ph. Lond., 1746.

† Dr. Warburg says that this ingredient was added to correct the otherwise extremely acrid taste of the tincture. Many other substances were tried, but none answered so well as prepared chalk.

‡ This is the Polyporus laricis (P. officinalis, Boletus purgans, or Larch agaric), "formerly," says Pereira, "used as a drastic purgative, and still kept by the herbalist."

### Peanut Oil.

THE rapid extension of the cultivation of peanuts in North Carolina, Virginia, Tennessee, Georgia, and South Carolina is due to the use now made of them for the oil they contain. According to official agricultural reports, previous to the year 1860 the whole crop aggregated only 150,000 bushels per annum, grown principally in North Carolina; last season's product reached two million bushels, valued at $3,000,000. In a commercial point of view the oil is much more important than the nuts themselves. This oil is in large demand, and answers for many purposes as a substitute for olive and almond oils; it keeps a long time without becoming rancid. The amount of oil contained in the nut varies according to latitude and other favorable conditions and circumstances, and is proportionately large.

All the oil comes from the "meat," the husk being of no value. The oil is extracted by pressure, and the pressed cake is used both as food for cattle and as manure. Algiers also supplies the port of Marseilles with large quantities of these nuts, from which the oil is expressed, and probably destined to augment the supply of the olive oil for which that city is so great a market. The production of peanut oil in the United States dates back to the war, when it was used to a large extent for table purposes in the South, olive oil being almost unobtainable; it was also used quite generally at that time as a substitute for lard. The cake residuum was made serviceable also; after being roasted and ground it was used in place of coffee and chocolate, making a tolerable if not a desirable beverage.

### The Chinese Oil Tree.

*Elæococca vernicia*, the oil tree of China and Cochin China, is a plant of the family of the *Euphorbiaceæ*. Its seeds, when submitted to strong pressure in the cold, yield about 35 per cent. of a liquid oil, colorless, inodorous, and almost insipid. Its specific gravity at 59° Fah. is 0.9362. At minus 32° it thickens, without losing its transparency or crystallizing. By treatment with ether, 41 per cent. of oil can be extracted from the seed, slightly colored, but presenting otherwise all the character of the oil obtained by pressure. If, instead of ether, purified bisulphide of carbon is employed, the fatty matter remaining after the solvent has been evaporated off at 212°, solidifies on cooling, forming a number of small reniform masses, which present under the lens a decided crystalline texture. This solidified fat has the same elementary composition as the liquid oil obtained by pressure, and melts at 93° Fah. The oil extracted by pressure in the cold is rapidly solidified by light in the absence of air, an effect which, on further experiment, was found due to the more refrangible rays of the spectrum alone. Attempts are being made to acclimate this plant in France, and with hopes of success.

The oil is extracted from the fruit, which yield one-third of their weight of a thick, odorless, tasteless, and colorless oil, which at a reduced temperature becomes a thick viscid substance, possessing drying properties of the most pronounced type. If spread on a plate of glass or metal, it dries in a few hours, on exposure to the air. This property, in which it surpasses all other known oils, is expected to render it of peculiar value in many of the arts.

### A New Element—Gallium.

IN the *séance* of the French Academy of Sciences, on the 27th ult., M. Wurtz presented, in the name of M. de Boisbaudran, an important communication detailing the chemical and spectroscopic characteristics of a new metal—gallium—discovered on August 27, 1875, in the mine of Pierrefite, valley of Argelès (Pyrénées).

M. Boisbaudran says in his communication: "The day before yesterday, Friday, August 27, 1875, I found indications of the probable existence of a new elementary substance in prosecuting a chemical examination of a blended ore derived from the mine of Pierrefite."

The extremely small quantity of the substance at command did not enable M. Boisbaudran to isolate it entirely from the accompanying zinc. The few drops of chloride of zinc in which the new substance was contained yielded under the action of the electric spark a spectral ray of violet color. He, therefore, believes he has discovered another element.

Spectrum analysis has already aided in the discovery of several new metals, such as cæsium, rubidium, thallium, etc. This new metal, gallium, is not likely, at present at least, to prove more than an addition to an extremely rare category.—*Chemist and Druggist.*

### Tayuya: A New Antisyphilitic.

IT is stated in the *Bulletin Gén. de Thérapeutique*, that while travelling in Brazil, a gentleman named Ubicini found that some negroes used this remedy as an antisyphilitic. He procured some and gave it to Mr. Stanislas Martin, who isolated from it a green resin, some yellow unctuous matter, and a very bitter, highly aromatic brown extractive; he also found tannin, starch, mucilage, volatile matter, magnesia, alumina, lime, iron, potash, and woody matter. The mineral substances are exceedingly abundant in this plant, and are precipitated at once from a strong decoction.—*The Doctor.*

### Active Principle of Cotton-Root Bark.

DR. PRESCOTT, of Ann Arbor, Mich., reports that cotton-root bark had been recently examined under his supervision in the laboratory of the university by Wm. C. Staehle, who found that it contains no alkaloid, but a characteristic dark-colored resin, to which is probably due the activity of the drug.

### Opianin.

THE alkaloid which Dr. Hinterberger found in some supposed narcotina obtained by Engler of Vienna, and to which he gave the name of opianin, has for some time been suspected to be narcotina, probably in an impure state, in spite of the apparent discrepancy of the elementary composition of the two bodies. In a foot-note to p. 55 of *Flückiger and Hanbury's Pharmacographia* we are informed that O. Hesse had examined Hinterberger's opianin, and regards its existence as extremely doubtful. Hesse's experiments have just come to a conclusion, and his results establish the absolute identity of narcotina with the supposed opianin. It is supposed that Hinterberger's mistake in finding a difference between this particular sample and the ordinary narcotina originated from the fact that his standard sample of the latter alkaloid was impure.—*Ann. d. Chem.*, 178, 241.

### Adulteration of Copaiva in Capsules.

THE *Pharmaceutische Zeitung* says that capsules of copaiva were recently offered to a druggist at such a low price that he was led to suspect their purity, and found, on examination, that the enclosed fluid, although of good appearance, color, and consistency, when evaporated at 110° to 120° C., left a residue which was clear while hot, and thick, oily, and turbid when cold. Heated to 200° C., vapors were evolved which were distinctly recognized as those of acroleïn. The residue, treated with alcohol, gave a fluid insoluble in that liquid, which behaved as a fat-oil, and seemed related to poppy oil. This fat-oil formed from twenty to twenty-two per cent. of the balsam. True copaiva treated as above gives a clear, bright, hard resin.

### Jute as a Surgical Dressing.

IN the *Berliner klin. Wochenschrift*, 1875, No. 35, Dr. B. Crédi mentions that jute, which is the fibre of the *Corchorus capsularis*, which grows in Bengal, when impregnated with salicylic acid has been employed as a dressing by some of the advocates of the antiseptic method of dressing wounds, and it is claimed for it that it is eminently suitable, on account of its cheapness, and its allowing free escape of matter from wounds while affording complete antisepsis.

### Chrysophanic Acid.

THE composition of this constituent of rhubarb has heretofore been given as $C_{14}H_8O_4$; but C. Liebermann and O. Fischer have shown that an impure acid must have been used in the determination of its formula, and that reliable results can only be obtained from previously sublimed chrysophanic acid. According to these chemists the formula of the acid is $C_{15}H_{10}O_4$ or $C_{14}H_5O(CH_3)(OH)_2O_2$.—*Ber. d. d. Chem. Ges.*, 1875, No. 14.

## PHARMACY.

### Free Carbonic Acid in Water.

CARBONIC acid gas is soluble in water, under atmospheric pressure, only to the extent of one volume of gas in one of water. By increasing the pressure, however, the water may be made to dissolve a quantity of this gas proportional to the pressure. This property enables the manufacturers of mineral water and the so-called soda-water to prepare solutions which contain a large amount of carbonic acid gas, and form a pleasant, sparkling drink. Nature, too, has the power of impregnating natural waters with so much carbonic acid as to form sparkling springs wherever it comes to the surface. Such water possesses extraordinary solvent powers, and if in its subterranean course it chances to meet with any limestone, it dissolves so much of that as to be known as a lime water, or "hard water,"—a terror to owners of steam-boilers. Carbonic acid water is capable of dissolving not only marble, but even iron, and hence we find chalybeate springs at Saratoga and in other places.

Whence do natural spring waters obtain their carbonic acid? This is an interesting question, and one about which there seems to be some disagreement. Dr. Von Pettenkofer, in a paper read before the Bavarian Academy of Science, suggests the following rather unpleasant origin of this gas, whose presence in water had been generally considered so desirable:

"I have proved that carbonic acid is not formed in the water which is in the earth, nor obtained by it from gas springs where it escapes from lower strata, but that it comes from the subterranean air which is in contact with the water, and where it can be generated only by the decomposition of organic matter. Hence, from a hygienic point of view, of the waters about Munich and in all limestone countries, those which contain the most carbonic acid are seldom the best and purest, because we must take in the bargain along with the carbonic acid many other substances which we would otherwise gladly avoid."

The presence of free or uncombined carbonic acid in spring-water in a limestone region is quite uncommon (unless it be derived from subterranean gas springs), for the reason above stated, that it dissolves the carbonate of lime, or chalk, forming with it the soluble bicarbonate of lime.

To ascertain whether a given sample of water contains any free carbonic acid, or whether all the acid exists in combination with lime, two methods are given by Pettenkofer. The first consists in the use of turmeric paper along with lime-water. Water containing bicarbonate of lime is without action on turmeric; hence, if a few drops of lime-water be added to water containing free carbonic acid, a bicarbonate will be formed and the tur-

meric will not be browned until an excess of lime-water has been added over and above what is required to combine with all the free carbonic acid. If the water to be tested contains no free carbonic acid, a single drop of lime-water will render it alkaline, and the turmeric paper will be browned. The second and more recently discovered method is, however, preferred by Pettenkofer, but unfortunately the reagent is neither so well known nor so easily prepared. It is rosolic acid, prepared by Kolbe's process, namely, the action of sulphuric acid on phenol and oxalic acid. This acid is colored red by the bicarbonates of the alkalies and alkaline earths. To prepare the test solution, dissolve one part of pure rosolic acid in 500 parts of 85 per cent. alcohol, and neutralize with caustic baryta until it begins to redden. Add about one-half cubic centimetre of this solution to 50 c. c. of water; if the liquid becomes colorless or yellowish, it contains free carbonic acid; if red, only bicarbonates are present. In tests made by Pettenkofer on German waters, he reports that all the spring and well waters of Munich, the waters of the Isar, the water of the "stadtbäche," and some drinking-water from Würzburg gave the red color indicating bicarbonates. Distilled water, rain, and snow water, of course, were not reddened. Of those which remained colorless he mentioned Selters, Apollinaris, Wildungen, Kissingen, Racoczy, Weilbach sulphur water, Pyrmont iron water, etc.

### The Aloïn of Barbadoes Aloes.

In the course of certain experiments with some supposed barbaloïn, obtained from England, E. Schmidt, of Halle, obtained results differing from the hitherto accepted statements and formulæ. He therefore caused one of his assistants to re-examine the subject, and now reports the following:

Barbadoes aloes were extracted by Tilden's process (*Pharm. Journ. Trans.*, 1872: 845, 951); the crude aloïn obtained was several times recrystallized from alcohol, until well-defined, yellow, needle-shaped crystals were obtained, tolerably soluble in water and alcohol, but difficultly in ether; they do not possess the saffron-like odor of aloes, but are of an intensely bitter taste. Hydrated aloïn fuses between 70° and 80° C., anhydrous aloïn at 146°–148° (Stenhouse 150°). Its water of crystallization is removed by drying over sulphuric acid, or by heating at 100° C. The quantity of water present varies not only in products obtained by different processes, but even in the same product according to the concentration and temperature of the solutions, from which it crystallizes: the percentage varied between seven and fourteen.

The analysis of this aloïn, dried at 100°, gave the same figures as were obtained from the English sample, namely, 58.50 C, and 5.50 H (mean of twelve analyses), corresponding to the formula $C_{15}H_{16}O_7$, which requires 58.50 C and 5.19 H, while Stenhouse had assigned to the anhydrous aloïn the formula $C_{17}H_{18}O_7$ (requiring 60.6 C and 5.6 H). But Sommeruga and Egger (*Chem. Centralbl.*, 1874, 422) have established for the aloïn from socotrine aloes (socaloïn) the same formula, $C_{15}H_{16}O_7$, from which we see that there is no difference in the composition of these two substances; but whether they are entirely identical, or merely isomeric, can as yet not be decided.—*From Ber. d. d. Chem. Ges.*, 1875, 1275.*

### Reduction of Iodates, Bromates, and Chlorates, to Iodides, Bromides, and Chlorides.

While the usual process for the reduction of these salts consists in fusing them, either alone, or with charcoal, G. Pellagri proposes to use a method based on the fact that potassium iodate in dilute solution is reduced by shaking with iron filings, or zinc powder (not copper or tin), and that these latter metals become oxidized.

Shaking the solution, while hot, with iron filings produces complete reduction, and there is neither any iodine carried down with the precipitate, nor will there be any iron in solution. In too concentrated solutions, as soon as a large quantity of ferric oxide has been thrown down, the latter may again have an oxidizing effect upon the potassium iodide. In this case a complete reduction of the iodate can be accomplished only by filtering repeatedly and treating with fresh iron filings. This oxidizing action of ferric oxide was confirmed directly with pure potassium iodide. But even a concentrated solution of an iodate may be entirely reduced *in the cold* by introducing into the liquid an iron plate and a copper plate, connected *outside of the liquid* by a wire, forming a galvanic element. In this case the iron alone becomes oxidized, but on account of the small surface it takes several days to complete the reduction. Towards the end of the reaction a greenish deposit of a mixture of ferrous and ferric oxides is thrown down, which is converted into red oxide by adding a little more iodate solution. This process, which may be used in working on a large scale, involves neither loss of iodine, nor contamination with iron or copper. Zinc, in powder, acts, in the beginning, more powerfully than iron, but complete reduction can only be obtained by means of a zinc-copper element. Potassium bromate is similarly reduced to bromide by the iron-copper elements, and the same greenish compound marks the end of the reaction. Potassium chlorate, in warm aqueous solution, is likewise reduced to chloride by shaking with iron filings; but the iron-copper or zinc-copper elements act upon chlorates very slowly, and do not entirely reduce them.—*Ber. d. d. Chem. Ges.*, 1875, 1356.

* Further researches made by W. A. Tilden, of London, confirm the above statement of the identity in composition of the aloïn obtained from Barbadoes and Socotrine aloes, to which must be added also that obtained from Zanzibar aloes; but from his analyses he deduces the formula $C_{16}H_{18}O_7$.—*Pharm. Journ. and Trans.*, Sept. 11, 1875.

### Determination of Solubility.

OUR text-books on chemistry differ materially in their statements regarding the solubility of different substances, and it is sometimes utterly impossible to reconcile the figures given. One great source of error is the difference in the methods pursued, and another is — unhappily unavoidable—the "personal" error, that is, the more or less varying individual capability of following one and the same process at all times with equal skill and care. In order to eliminate all causes of unreliability as far as possible, it is clear, that, as we cannot make laws to remove the "personal" error, we must at least equalize all other conditions, and settle upon some standard process of observation, such as has been adopted for the determination of other similar numerical values, as, for instance, the melting-point, boiling-point, or specific gravity of bodies. Victor Meyer proposes therefore the following process for the determination of the solubility of any substance:

The substance under examination is dissolved in the liquid at a boiling temperature in two separate test-tubes, of the capacity of 50–60 c. c.; as soon as solution has taken place—or as soon as the liquid has taken up all the matter it can—the two tubes are placed into a capacious beaker containing cold water, and the contents of the tubes briskly stirred up with sharp-edged glass rods, until they have assumed the temperature of the surrounding water. This causes the separation of the excess of the substance under examination in a very finely divided state, and prevents supersaturation. After allowing the whole to stand for about two hours, the temperature of the water in the beaker, which has also been stirred up, is noted, the contents of the tubes are once more briskly stirred, and immediately thereafter a sufficient quantity of the solution is filtered through *dry* filters into tared capsules provided with well-fitting lids. After weighing capsules and contents the liquid is evaporated, until the residue is of a constant weight. The following numbers are given as samples of results obtained:

Potassium chlorate was dissolved in water in two test-tubes, and treated in the above-mentioned manner.

Tube 1: 10.9800 gm. solution at 18°, gave 0.7025 gm. residue.
Tube 2: 11.6289 gm. solution at 18°, gave 0.7421 gm. residue.
100 parts of water at 18° (C.) therefore dissolve:
(1) 6.83, (2) 6.81—parts of $KClO_3$.

The contents of the same tubes were allowed to stand for 24 hours, and after again briskly stirring, two fresh samples were filtered off at a temperature of 17° C., with the following results:

Tube 1: 9.4151 gm. solution, gave 0.5899 gm. residue.
Tube 2: 10.4340 gm. solution, gave 0.6525 gm. residue.
100 parts of water therefore dissolve at 17° C.:
(1) 6.68, (2) 6.67—parts of $KClO_3$.

The influence of one degree of temperature therefore shows its effect with great precision. To determine the solubility of a substance at higher temperatures, as for instance, in boiling water, or boiling alcohol, V. Meyer has constructed an apparatus, which is difficult to describe, but the main features of which are the enclosure of solution-tube, filter, and receiving-vessel, within another vessel filled with the vapor of the liquid, at the boiling-point of which the degree of solubility is to be ascertained. The figures obtained for potassium chlorate in this case were the following:

Trial 1. 13.977 gm. solution at 98° C., gave 4.9897 gm. residue.
Trial 2. 39.9339 gm. solution at 98° C., gave 14.2338 gm. residue.
Trial 3. 42.3925 gm. solution at 98° C., gave 15.1404 gm. residue.
100 parts of water at 98° C. therefore dissolve:
(1) 55.54. (2) 55.40, (3) 55.55
parts of $KClO_3$.

—*Ber. d. d. Chem G.*, 1875, No. 14.

### Pancreatic Enemata.

THE following method of employing pancreatic enemata is described by Dr. R. Frichtner, of Basel, in the *Allg. Wien. Med. Zeitung*. The quantity of injection advised for an adult is from 200 to 400 grammes (about 6 to 12 ounces), *two-thirds* of which should consist of beef, and *one-third* of pancreas. The beef and pancreas must be quite fresh, free from fat and skin, and intimately mixed together; a little warm water (under 39° C.) is added. This gland, called by butchers the sweet bread, is very succulent if the animal is fed just before being slaughtered, and only those glands should be used which are loaded with their peculiar secretion. Their weight is about 300 to 400 grammes each, while not more than 100 to 130 grammes (about 3 to 4 ounces) are required for the enema. The remainder, however, cannot be used for the next operation, as it soon decays; a fresh gland is therefore necessary. In places where beasts are not daily slaughtered the gland can be preserved. It must be cut into very small pieces and rubbed up with pure glycerine into a panada. The pancreatic ferment is dissolved and preserved by the glycerine (see Wittich in *Pflüger's Archiv*, 1869–70). This compound of pancreas and glycerine can be mixed with the minced beef, as required, and without any hindrance to its absorption by the intestinal mucous membrane. The enema should be administered by means of a strong syringe. We have generally used the forcing syringe described by Leube, which can be screwed to a table, and which, by means of a lever, admits of our employing a good deal of pressure; this increased pressure being absolutely necessary to overcome the obstacle presented by the tube to the passage of such a pultaceous (or sausage-like) mixture. If the common clyster syringe is used, it should then be provided with a long elastic tube, or, better still, an English stomach-pump tube, which is connected with the syringe by a piece of India-rubber tubing, and provided at its end with a small centrally-bored nozzle made of horn or some other material. By a contrivance of this kind the surgeon is able to propel the injection far up without running the risk of injuring the gut; and in our cases the tube was always introduced to the extent of eighteen inches. The further this nutrient enema reaches, the greater will be the extent

of the absorbing surface, and the greater the rapidity with which the ingesta are absorbed and taken up by the system. In one of our patients, in whom a post-mortem examination was made twenty-four hours after an enema of this kind had been administered, a part of the injected matter was found as far up as the cæcum and transverse colon. Lastly, before resorting to this operation, the bowel should be well cleaned out by an ordinary injection of water, and, if possible, the nutrient enema should be withheld for twenty-four hours, so as to admit of the bowel being emptied on the following day.—*Medical Press and Circular.*

**Volumetric Estimation of Potassium Iodide.**

THE process is founded upon the fact, that if a solution of mercuric chloride be added in small quantities at a time to a solution of potassium iodide,—potassium chloride and a soluble compound of potassium iodide and mercuric iodide are formed, until one-half of the potassium iodide is decomposed; the smallest further addition of mercuric chloride then produces a persistent red precipitate.

The test-liquor is prepared by dissolving 13.55 gm. of mercuric chloride and about 10 gm. of potassium or sodium chloride, so as to make one litre of solution. In another vessel, 33.20 gm. of the potassium iodide to be tested are dissolved, so as to make one litre of solution; 10 c. c. of this are then placed in a glass vessel, and the standard solution of mercuric chloride is dropped in from a burette till the permanent red precipitate is formed. The quantity of mercuric chloride solution then used indicates the richness of the potassium iodide, for it will be seen that the solution of potassium iodide contains *two*-tenths of an equivalent, and the mercuric chloride solution *one*-tenth of an equivalent respectively. Carbonate, chloride, or bromide of potassium do not interfere with the process.—M. Personne, *Pharm. J. Trans.* (3), v., 606.

**Spontaneous Decomposition of Chloroform.**

CHLOROFORM when exposed to the action of light or heat, especially if it contains the smallest quantity of water, is liable to spontaneous decomposition, hydrochloric and formic acids being produced, a condition which renders it highly dangerous for medical or surgical uses. M. Jaillard examines such chloroform as follows:—Shake a small quantity of the chloroform in a flask, with half its volume of distilled water, and add to the separated water nitrate of silver; should it give a white curdy precipitate, insoluble in nitric acid, and soluble in ammonia, hydrochloric acid is undoubtedly present. Filter to remove the chloride of silver, then boil, after having added more of the silver reagent; should a black precipitate be produced, formic acid is present. To purify chloroform from these acids, it is necessary to wash carefully with a potash solution, and then to distil from chloride of calcium.—*The Chemist and Druggist*, from the *Jour. de Phar. et de Chemie.*

**Comparative Determinations of the Solubilities of Alkaloids in Crystalline, Amorphous, and Nascent Conditions; Waterwashed Solvents being used.**

PROF. A. B. PRESCOTT read an interesting paper on the above subject before the Detroit Meeting of the American Association for the Advancement of Science, from which we extract the following: In order to obtain reliable results, it is necessary to previously saturate the solvent intended to be used, with water, so that there may be no increase or diminution of the amount of the solvent from that cause. The various solvents used were:

*Washed ether*, neutral, sp. gr. 0.729 at 15° C.; before washing it was acid, and its sp. gr. 0.7477 at 15° C.

*Washed chloroform*, neutral, sp. gr. 1.4953 at 15° C.

*Washed amylic alcohol*, sp. gr. 0.8316.

*Washed benzole*, sp. gr. 0.8766. Boiling point, 89° C.

The two alkaloids experimented on were morphia and cinchonia; the former was purified by digesting and washing with the solvents employed respectively; the latter was washed on a filter for some time with ammonia of sp. gr. 0.96; then dried and well washed with ether and dried again.

The solvents were generally applied at their boiling-points, for five minutes, when they were turned upon the filter. To dissolve in the "nascent" state, a sulphuric-acid solution was warmed in a large test-tube, mixed with the solvent, and the mixture warmed to the boiling-point of the solvent, then made *slightly* alkaline with ammonia, and shaken, and kept warm for five minutes; then turned upon the filter. The filtered solutions were received in a tared specific gravity bottle, the bottle being stoppered as soon as possible, and the weight of the bottle and contents taken. The solution was then turned into a thin tared beaker, the bottle well rinsed with portions of the solvent into the beaker, the liquid evaporated on the water-bath, at a suitable temperature, and the weight of the residue taken. The weight of the residue deducted from that of the solution gives the weight of the solvent.

Number of parts of water-washed solvent required for one part of alkaloid:

| | *Ether.* | *Chloroform.* | *Amyl. Alcoh.* | *Benzole.* |
|---|---|---|---|---|
| *Morphia.* | | | | |
| *Crystallized*..... | 6148 | 4379 | 91 | 8930 |
| *Amorphous*..... | 2112 | 1977 | — | — |
| *Nascent*..... | 1062 | 861 | 91 | 1997 |
| *Cinchonia.* | | | | |
| *Crystallized*..... | 719 | 828 | — | — |
| *Amorphous*..... | 563 | — | 40 | 531 |
| *Nascent*..... | 526 | 178 | 22 | 376 |

Crystallized morphia, treated fifteen minutes with washed chloroform at 25° C. required 9770 parts of the solvent; treated with boiling chloroform, allowed to deposit for twelve hours, and then filtered, the solution held one part morphia

in 6209 (Wormley gives 6550 as ratio of chloroform—not washed—to morphia in saturated solution; Hager states in *Untersuchungen*, II., 154, that it is soluble in about 90 parts chloroform, in *Commentar zur Pharm. Germ.*, II., 386, 150 parts).

Determinations of solubilities, when the ratio of solvent to solid is very large, must necessarily be approximate rather than precise, even when the stable *saturated solutions* are determined. And when the unstable *supersaturated solutions* are undertaken it is evident that variations must be greater. The time taken in filtration, for instance, and the atmospheric temperature during filtration, must affect the results.—From *Amer. Chem.*, Sept., 1875.

### Barium Sulphate.

THE disagreeable property of barium sulphate to run through the filter in spite of all care, is well known to chemists. Since the cause of this is the extremely fine division of the precipitate, it occurred to Leo Liebermann to make the precipitate somewhat coarser by means of an adhesive substance, and he succeeded in effecting this by means of starch. On adding to the liquid in which barium sulphate *has already been* precipitated, a small quantity of starch (as much as will cover the point of a penknife), and warming for five or six minutes under constant stirring, the precipitate will be entirely retained by the filter, no matter whether the liquid be hot or cold, and may be washed with cold water. This is *not* the case, however, if the starch be added to the liquid *before* the precipitation of the barium sulphate, and especially when the liquid is strongly acid. This method has been proved to be very reliable and useful in quantitative analysis. From a number of experiments it was found that ½ c. c. of a mixture, containing 1 gm. starch in 500 c. c. water—or 0.0002 gm. starch—was sufficient to filter 0.5–1.0 gm. of barium sulphate without loss. The reduction of the sulphate by the carbon of the starch during ignition is too insignificant to be taken into account.—*Zeit. Anal. Chem.*, 1875, 339.

### Moffit's Method of Soap Analysis.

THE soap is cut into thin shavings, and 10 gm. of it are digested with 150–180 cc. of alcohol on the water-bath, the solution filtered, and the residue repeatedly washed with hot alcohol. The residue, consisting of carbonates and other salts, coloring matter, etc., is dried at 100°, and weighed on a tared filter; afterwards it is digested with water, and the solution titrated with normal oxalic acid solution for the amount of sodium carbonate. The weight of the latter deducted from that of the original residue gives the weight of other salts present. Through the filtrate, consisting of an alcoholic solution of the soap, with free alkali, a stream of carbon dioxide is passed, as long as a precipitation takes place. After filtering, the precipitate is dissolved in water and titrated with the oxalic acid solution. No precipitate proves the absence of free alkali. The filtrate from the carbon dioxide precipitate, or the clear solution in the absence of a precipitate, is heated on the water-bath, after the addition of water, until all the alcohol is evaporated. In this aqueous solution the combined alkali is determined by the normal oxalic acid. Sulphuric acid is now added for the rapid separation of the fat-acids, 10 gm. of beeswax are next introduced, and the whole is heated, in order to melt together the fat-acids and wax. On cooling, the solidified cake is taken off, dried, and weighed. The weight is that of the fat-acids, wax and resin. 40 gm. of soap are dissolved in water, and sulphuric acid is added, till all precipitation ceases. After standing in a cool place, the fat-acids separate, and the cake thereof can be dried and weighed, after which it is digested with a mixture of ether and alcohol, with agitation, until the solution ceases to be milky. The remaining cake is again weighed. The difference indicates approximately the amount of rosin present. 10 gm. of the soap are dissolved in alcohol and treated with sulphuric acid diluted with alcohol, till all precipitation ceases. The solution is then filtered, barium carbonate added and again filtered. After evaporating off the alcohol, the weight of the sweet-tasting residue gives the glycerine. The water is estimated by difference.—*Journ. Chem. Soc., from Dingl. Pol. J.*

### Salicylic Acid and Borax.

MR. B. HIRSCH, of Giessen, has made the observation that a solution of 1 part each of salicylic acid and borax in 50 parts of water is of strongly acid reaction, and of an *intensely bitter and persistent taste*. On evaporating this solution to dryness on the water-bath a residue is left, which, excepting a small quantity devoid of bitter taste, is soluble in alcohol of s. g. 0.830. The addition of ether to this alcoholic solution produces no precipitate, and only separates a few trifling flakes after standing. On distilling off the alcohol and ether, a gum-like mass, soluble in alcohol and water, is left behind, having the above-mentioned characteristic bitter taste.

A solution of 1 part of salicylic acid and 2 parts of borax in 50 parts of water has only a very feebly acid reaction; and it is a remarkable fact, that it is entirely destitute of bitterness; on the contrary, its taste is at first *very sweet*, then momentarily salty, which is again followed by a decided and lasting sweetness. On evaporating this solution, a residue is left which is only partially soluble in alcohol of s. g. 0.830, and seems to be only borax. Addition of ether to the alcoholic solution separates even after long standing only trifling flakes. After distilling off the ether-alcohol, a gum-like mass is left, whose watery solution separates copious white flakes. The taste of this gum-like mass is intensely and persistently bitter, only after some time there is developed a faint trace of sweetness. The sweet compound produced by 1 part

of salicylic acid and 2 parts borax seems to be split up by the simple addition of alcohol into a salty (borax) and a bitter one.

A solution of salicylic acid, only partially neutralized with sodium carbonate, and still quite acid, is devoid of bitterness, but has a sweetish, salty taste, similar to that of the preceding solution. Hence it is *not* the partial neutralization of the acid by soda (in this case by the soda of the borax) to which is due the intense bitterness of the first-mentioned solution, but it must be ascribed to the borax itself.

Further experiments are expected to furnish an explanation of these peculiar facts.

### Curious Action of Glycerine upon Borax.

MR. F. LONG writes to the *British Medical Journal*: "I had occasion to make an alkaline lotion for a case of acne a short time ago, which consisted of borax, bicarbonate of soda, chlorate of potash, glycerine, and water. After the ingredients were put in and the bottle filled with water, I added half an ounce of glycerine, and corked the bottle. To my surprise, in a few seconds violent action began to take place, and I was obliged to remove the cork for fear of an explosion. I could not understand what had taken place, and could only think that there was some acidity in the glycerine. But such was not the case—it was perfectly neutral to test-paper; and the other chemicals, I believe, were perfectly pure. I then repeated the experiment in the following way, and a very interesting one it was, perfectly inexplicable to me, and of which I can gather no information from any work. I put into a test-tube about equal parts of powdered borax and bicarbonate of soda, with a little water; I then added some glycerine, which, of course, sank through the solution of soda, and rested over the borax; chemical action immediately began, the glycerine gradually became dissipated, and the borax was dissolved. I have repeated the experiment several times, and have obtained the same result with the carbonate, although not to the same amount. The change is evidently at the expense of the glycerine; for if only a few drops be added, the action soon stops, to be renewed with great intensity if a large quantity be then added. I am not sufficient chemist to unravel the decomposition."

### Preservation of Morphia Solution.

IT is asserted by M. Vidal that the addition of chloral to a solution of morphia renders it much less liable to spontaneous change. This fact, if it be true, is important. The alterations which concentrated solutions of morphia undergo, render their strength variable and uncertain if they are laid by for a time. M. Vidal adds to the solution a quantity of chloral equivalent to twice the weight of the morphia it contains. He affirms that the injection of this mixture is not painful.—*Lancet.*

### Table Showing the Percentages of Water Contained in Glycerine of Different Densities.

THE following table, based upon new determinations, has been constructed by Champion and Pellet:

| Spec. Grav. at 15° C. | Degrees of Baumé. | Per cent. of Water. | Spec. Grav. at 15° C. | Degrees of Baumé. | Per cent. of Water. |
|---|---|---|---|---|---|
| 1.2640 | 31.2 | 0.0 | 1.2350 | 28.6 | 11.0 |
| 1.2625 | 31.0 | 0.5 | 1.2335 | 28.4 | 11.5 |
| 1.2612 | 30.9 | 1.0 | 1.2322 | 28.3 | 12.0 |
| 1.2600 | 30.8 | 1.5 | 1.2307 | 28.2 | 12.5 |
| 1.2585 | 30.7 | 2.0 | 1.2295 | 28.0 | 13.0 |
| 1.2572 | 30.6 | 2.5 | 1.2280 | 27.8 | 13.5 |
| 1.2560 | 30.4 | 3.0 | 1.2270 | 27.7 | 14.0 |
| 1.2545 | 30.3 | 3.5 | 1.2255 | 27.6 | 14.5 |
| 1.2532 | 30.2 | 4.0 | 1.2242 | 27.4 | 15.0 |
| 1.2520 | 30.1 | 4.5 | 1.2230 | 27.3 | 15.5 |
| 1.2505 | 30.0 | 5.0 | 1.2217 | 27.2 | 16.0 |
| 1.2490 | 29.9 | 5.5 | 1.2202 | 27.0 | 16.5 |
| 1.2480 | 29.8 | 6.0 | 1.2190 | 26.9 | 17.0 |
| 1.2465 | 29.7 | 6.5 | 1.2177 | 26.8 | 17.5 |
| 1.2455 | 29.6 | 7.0 | 1.2165 | 26.7 | 18.0 |
| 1.2440 | 29.5 | 7.5 | 1.2150 | 26.5 | 18.5 |
| 1.2427 | 29.3 | 8.0 | 1.2137 | 26.4 | 19.0 |
| 1.2412 | 29.2 | 8.5 | 1.2125 | 26.3 | 19.5 |
| 1.2400 | 29.0 | 9.0 | 1.2112 | 26.2 | 20.0 |
| 1.2390 | 28.9 | 9.5 | 1.2100 | 26.0 | 20.5 |
| 1.2375 | 28.8 | 10.0 | 1.2085 | 25.9 | 21.0 |
| 1.2362 | 28.7 | 10.5 | | | |

—*Monit. scient.* (3), 3, 1033.

### Aromatic Arsenical Compounds.

A. MICHAELIS has prepared phenylarsenchloride — $AsCl_2C_6H_5$ — by acting upon mercurdiphenyl with arsenious chloride.

$$Hg(C_6H_5)_2 + 2\,AsCl_3 = HgCl_2 + 2\,AsCl_2C_6H_5.$$

The new compound is a colorless liquid, of very great density, feeble disagreeable odor, and refracts light strongly. It is chiefly interesting for the reason that it seems the starting-point of a new series of organic compounds containing phenyl, and possibly able to contain antimony, bismuth, boron, and other elements.—*From Ber. d. d. Chem. G.*, 1875, 1316.

### To Detect Alcohol in Ether.

P. STEFANELLI proposes to shake the ether with a small quantity of anilin-violet, which does not impart color to ether free from alcohol. The presence of 1 per cent. of alcohol, in not too thin a layer of the liquid, causes a distinct coloration. According to Pratesi, anilin-red may be used for the same purpose. A small percentage of water or acetic acid present in the ether is, according to the latter, immaterial, although it is better to previously dehydrate the ether with anhydrous potassa. Reghini d'Olleggio some time ago proposed resin of jalap for the same purpose, but this substance is as insoluble in ether containing only trifling quantities of alcohol as in pure ether itself, and only begins to be dissolved when the percentage of alcohol is tolerably large.—*Ber. d. d. Chem. Ges.*, 8, 439.

### Crystallized Glycerine.

GLYCERINE is purified by distillation in vacuo; to the distillate, cooled by surrounding ice-water, a trace of crystallized glycerine is added, causing a very slow and gradual formation of crystals—so slow as to require hours to obtain a few hundred grammes. At least this is the case when operating on a small scale. Cooling the glycerine below 0° C. retards crystallization very considerably, owing to the viscosity of the liquid; at —20° it becomes doughy and unmanageable. At 20 mm. pressure glycerine boils at 179° C. and the melting point of the crystals is 7° C. They belong to the rhombic system; the smaller crystals, which are exceedingly handsome, and while immersed in the mother liquor very lustrous and transparent, all are hemiedric.—*Pharm. Centralb.*, 1875, No. 39.

### Spice-Extracts for the Kitchen.

ANOTHER class of extracts has been added to those already in the market. Dr. L. Nauman, a chemist of Plauen, Saxony, has begun the manufacture on a large scale, by means of exhaustion with alcohol under high pressure, of extracts or essences of peach, sweet basil, mugwort (Artemisia vulgaris), bitter almonds, cardamom, citron, dill, strawberry, tarragon (Artemisia dracunculus) clove, raspberry, ginger, garlic, caraway, sweet bay, marjoram, carrot, mousseron (Agaricus tortilis), mace, allspice, thyme, parsley, pepper, savory, celery, pomegranate, sweet woodruff (Asperula odorata), onion, cinnamon and others. These essences are intended for kitchen use, and in addition to the extracts he also manufactures "spice-salts," that is, common salt impregnated with the flavors of the spice desired, in the proportion of 1 to 500 of salt, at the cost of about 16 cents per pound.

### Production of Aniline Colors without the use of Arsenic Acid.

THE Tournai Company for the manufacture of aniline colors has commenced in its new works a process in which the use of arsenic has been dispensed with. It appears to be Coupier's system, modified in some respects. The purity of the product leaves nothing to be desired, and it (probably magenta) is hence very suitable for the preparation of other derivatives. These colors may be used for articles of pharmacy and confectionery, liquors and syrups, etc.—*Comptes Rendus*, Aug. 9.

### Alkaloids of Aconite.

MESSRS. G. H. BECKETT and C. R. Alder-Wright have made a renewed chemical examination of aconite. They have isolated an alkaloid $C_{21}H_{45}NO_{10}$ which is physiologically indifferent, while a second one $C_{33}H_{45}NO_{11}$ is very active. Besides, they obtained a "pseudo-aconitia" which does not assume a distinct crystalline form, of the composition $C_{36}H_{49}NO_{11}$. —*Ber. der deutschen Chem. Ges.*, 1875, No. 17.

### Detection of Common Alcohol in Woodspirit.

M. BERTHOLLET recommends the mixing of the suspected liquid with two parts of sulphuric acid. With pure methylic alcohol there is formed methylic ether, entirely absorbable by water or sulphuric acid; while ordinary alcohol produces ethene (olefiant gas), which is almost insoluble in water and may be recognized and determined by causing it to be absorbed in bromine; 1–2% may in this manner be detected.—*Comptes Rendus*, Apr., 1875.

### Solubility of Bitter-Almond Oil.

OIL of bitter almonds is frequently stated as being soluble in 30 parts of water. Its exact solubility is difficult to determine, as no clear solution can be obtained under any circumstances, and the only criterion is the point at which the oil globules have disappeared. To accomplish this, according to Prof. Flückiger, about 300 parts of water are required.

### Detection of Fusel-Oil in Common Alcohol.

DR. C. BETELLI, in *Gazetta Chim. Ital.*, gives the following method: Dilute 5 cc. of the suspected alcohol with 6–7 volumes of water. Add 15–20 cc. of chloroform, shake strongly and allow to rest. The deposited chloroform is collected and allowed to evaporate spontaneously, when the fusel-oil will be left as a residue, recognizable by its odor, and by its reactions with oxidizing agents.—*Chemical News.*

### Bromide of Bismuth.

THIS compound is obtained by heating finely powdered bismuth with dry bromine in a hard glass tube closed at the end. It is a solid substance of a dark gray color, fusing at 190° to 202° C.; is insoluble in carbon disulphide, alcohol, or ether, but is soluble in hydrochloric acid. It is decomposed by water, or by heating with nitric acid.

### The Camphor of Ledum Palustre.

FROM about 1,000 pounds of the leaves of this plant gathered in the vicinity of St. Petersburg, by distillation with water, J. Tropp obtained an oil which has the property of soon becoming crystalline on exposure to the atmosphere. This solid camphor is almost insoluble in water, but readily soluble in alcohol, ether, and chloroform; from these solvents it crystallizes in fine prismatic crystals of the composition $C_{28}H_{48}O$ [Mr. C. R. A. Wright, in the *Journ. of the Chem. Soc.*, corrects this into $C_{30}H_{50}O$]; they are colored dark violet by a drop of a mixture of nitric and sulphuric acids, and yield orange crystals on boiling with nitric acid of spec. gr. 1.35. Chlorine, bromine and iodine convert the oil into a black mass.—*Jour. Chem. Soc.*, 1875, Oct., from *Ber. d. d. Chem. Ges.*

### Utilization of Bromine in Hydrometallurgy and Chemical Technology.

PROF. RUD. WAGNER strongly recommends the employment of bromine for manufacturing and metallurgical operations on a large scale. Its present low price, the abundant supply obtainable, its liquid form, and its energetic action make it in a large number of cases preferable to chlorine or other agents. The following are the chief uses for which he proposes to employ it :

1. *For the elimination of quicksilver from its ores.* According to official statistics of the Austrian quicksilver mines in Idria, the percentage loss of quicksilver was in

| | | | | | |
|---|---|---|---|---|---|
| 1870 | 46.7 | In new | 59.0 | In old |
| 1871 | 37.1 | style | 75.0 | style |
| 1872 | 48.2 | furnaces, | 72.0 | furnaces, |

and in muffles of the best construction the loss was still about 10%.

Now, as cinnabar is easily converted by bromine into mercuric bromide ($HgBr_2$), hydrobromic acid (HgBr), and sulphuric acid ($H_2SO_4$), the native ore can be treated with bromine water (containing 3% Br), or better still, with a saturated solution of bromine in hydrochloric acid (which takes up about 13% Br); after a few days the native sulphuret of mercury is decomposed and converted into mercuric bromide : $HgS + 4Br_2 + 4H_2O = HgBr_2 + H_2SO_4 + 6HBr$. For 100 lbs. mercury 320 lbs. bromine in solution are required. The bromide obtained need not all be reduced to metal, but may at once be worked up into other mercurial salts.

2. *For parting of gold.* A solution of bromine in water, or hydrochloric acid, or a mixture of hydrobromic acid solution and nitric acid, dissolves gold as $AuBr_3$. On heating this the bromine escapes and metallic gold is left behind.

3. *For separation of platinum.* Watery or hydrochloric acid solution of bromine has no action upon platinum. This fact may perhaps be made use of to separate platinum from other metals.

4. *For the preparation of red prussiate of potassa.* As E. Reichardt has already shown in 1869, the conversion of the yellow into the red prussiate by means of bromine is very simple, and unaccompanied by troublesome by-products; the mother-liquor contains potassium bromide.

5. *For the preparation of potassium permanganate.* Potassium manganate may easily be converted into permanganate according to the following equation : $2K_2MnO_4 + Br_2 = 2KMnO_4 + 2KBr$.

6. *For the preparation of arsenic acid.* This acid, which has formerly been used in very large quantities in the preparation of aniline colors, was generally prepared by passing chlorine gas through a mixture of finely ground arsenious acid and water; but bromine is a much better agent to produce the change. The reaction is finished as soon as a permanent yellowish color remains in the liquid : $As_2O_3 + 5H_2O + 2Br_2 = 2H_3AsO_4 + 4HBr$.

7. *For the preparation of phosphoric acid.* A solution of bromine in phosphorous bromide added to water yields phosphoric and hydrobromic acids : $Br_2 + PBr_3 + 4H_2O = H_3PO_4 + 5HBr$.

The hydrobromic acid may be distilled off, or the two acids may be converted into the barium salts, according to Liebig (*Wagner's Jahresb.*, 1862, 257), and the barium phosphate decomposed by sulphuric acid.

8. *For the manufacture of artificial coloring matters.* The latest of the coal-tar colors is already manufactured by means of bromine. It is called aurora-red or eosin, and is a bromated resorcin-derivative, namely tetrabrom-fluoresceïne : $C_{20}H_8Br_4O_5$.

*Quinia-green or Thalleioquine* may be prepared very finely by means of bromine (10 vol. of solution of quinia + 1 vol. of bromine water + 1 drop ammonia water).—*D. Indust. Zeit.*, 1875, 402.

### Acid in Growing Roots.

IF seeds (of barley for instance) be allowed to sprout between moistened folds of litmus paper, the newly developed roots, according to Ferd. Cohn, attach themselves strongly to the paper, and color it intensely red. The course of the growing roots may be distinctly traced on the back of the paper by means of the red streaks. To this development of a non-volatile acid in the roots must be partially ascribed the solution and assimilation of inorganic matters of the soil.

### Percentage of Vanillin in Natural Vanilla.

OWING to the fact that Messrs. Tiemann & Haarmann, the discoverers of artificial vanillin, found it impracticable to supply the market with the pure aroma, but had to adopt in place thereof a mixture of sugar and as nearly as possible the same percentage of the aromatic principle as is contained in the natural pods, they found it necessary to discover a method of estimating the vanillin in the different vanillas of commerce. This method is based upon the fact that aldehydes, to which class vanillin belongs, enter into (frequently crystalline) compounds with acid sulphites of the alkalies. The comminuted pods are exhausted in a displacement-apparatus with ether; the vanillin is extracted from the solution by saturated solution of acid sodium sulphite, and finally precipitated by sulphuric acid. In this manner the following percentages of vanillin were found, namely—

1.69 in Mexican Vanilla.
2.48 " Réunion "
2.75 " Java "

Comparing present market rates, 1 gm. of vanillin costs, in the first variety, $2.90; in the second, $1.77; and in the third, $1.40. As the Mexican, in spite of its lower percentage of vanillin, is the dearest, the lower price of the others must be ascribed to the fact that they contain a peculiar odorous resin, impairing somewhat the

aroma. The amount and quality of the vanilla produced in Réunion, however, is steadily improving. In 1870 there were about 700 acres of land under cultivation, which produced 37,024 lbs. Since the Paris exhibition of 1867 the price of the finest Réunion vanilla has advanced from 16 to 100 francs. Richard has transplanted the vanilla to Mauritius, which exported in 1867 to the value of £1,488; 1868, £965; 1869, £2,004; 1870, £2,860; 1871, £3,345 (equal to 4,920 lbs.).

In this connection we may add, that Ferd. Tiemann having recognized the identity of vanillic acid (prepared from *artificial* vanillin—the latter from coniferin) with monomethylprotocatechuic acid, which may be prepared by different steps from phenol, has now also succeeded in preparing vanillin *synthetically*.

### Adulteration of Guano.

F. JEAN has analyzed a product of English origin, used upon the Continent for the adulteration of guano, with which it is identical in color. It consists of:

| | |
|---|---|
| Water | 16.80 |
| Calcium sulphate | 53.50 |
| Calcium phosphate | 22.06 |
| Iron and alumina | trace. |
| Silica | 0.50 |
| Calcium carbonate | 1.60 |
| Sodium chloride | 3.71 |
| Organic matters | 1.80 |
| Nitrogen | 0.03 |
| | 100.00 |

### Potassium Iodide and Sugar.

ACCORDING to E. Durnell, a solution of potassium iodide containing sugar liberates free iodine, when exposed to light.—*Séance de la Soc. Chim.*, Nov. 5.

## SOME RECENT PAPERS IN OUR EXCHANGES.

**Berichte d. deutsch. Chem. Gesellschaft,** No. 16.—ERNEST SCHMIDT. "On the Aloïn of Barbadoes Aloes."—A. PINNER. "On some By-products obtained in the Preparation of Croton-chloral."—O. WALLACH. "On the action of Potassium cyanate on Chloral hydrate."

**Neues Repertorium für Pharmacie,** Bd. xxiv., No. 7.—BECKER, P. "On Santonin Poisoning and its Treatment."

**Archiv der Pharmacie,** Aug. and Sept.—FLÜCKIGER, F. A. "Notice on the Solubility of Oil of Bitter Almonds in Water."—GERLICH, G. "On Rhodanallyl, and Artificial Oil of Mustard."—WEPPEN, H. "Formation of Kermes."—WITTSTEIN, G. C. "Examination of Cotobark."—HARZ, C. *Idem.*—HUSEMANN, TH. "On Two New Poisons."

**Chicago Pharmacist,** Dec., 1875.—J. G. STIELE—"Grindelia Robusta." [Remedy against the effects of Rhus toxicodendron.]—HUGO, W. C. MARTIN. "Emulsions." [On Mr. Hastings' 'Emulsifier.'—A vaginal syringe used for the rapid preparation of emulsions.]—"Alum in Wyoming Territory." [At Point of Rocks, on the U. P. R. R.; near Evanston, Percy; in the breakwater along Bitter Creek, and near Ogden in Utah.]—"The Papyrus Ebers." [Reprinted from the *N. Y. Tribune.* In another issue we will give some unpublished statements of the contents of this singular and important document.]—"Hemlock or Spruce Gum."

**The Chemist and Druggist,** Nov. 15.—"The Cultivation of Analytical Practice by Chemists and Druggists."—MR. ED. L. CLEAVER.—"The Analysis of Cinchona Bark." [The process of Mr. Cleaver has been severely criticised as utterly fallacious.]

**Scientific American,** Dec. 25.—"Filters and Liquid Measures." [Explanations and diagrams of laboratory, domestic, reversible and charcoal filters, Siemens' and Halske's spirit meter, Duboy's water meter, Young's spirit meter, Sickle's meter, Liquor thief.]

**American Journal of Pharmacy.**—W. H. PILE. "Notes on Dilute Phosphoric Acid." [Satisfactory results obtained by Professor Markoe's process.]—C. F. RINGLER, M.D. "A Modern Classification of Medicines."—X. LANDERER, Athens, Greece. "Notes on some Medicinal and Dietetic Articles." [The toxical effects of Conium.—A Remedy for the bite of Rabid Dogs and Venomous Snakes, (40 to 60 doses of a mixture of 4 to 6 grains of the root-bark of Cynanchum erectum and ½ to ½ grain of powd. Mylabris variegata, per dose)—Saffron-rhodosaccharis and mastichglyco (two confections)—Crithmum maritimum—Caissopyta (pulp of apricot)—Betmése (inspissated grape-juice)—Arbutus Unedo—Laurus nobilis—Solanum lycopersicum.]

**American Chemist,** October.—H. ENDEMANN. "Salicylic Acid." [With an account of the literature of the subject.]—P. CASAMAJOR. "Funnels with Auxiliary Vertical Tubes."—PROF. B. SILLIMAN. "Examination of the Body of Mrs. Mary Augur." [Case of poisoning with a mixture of oil of vitriol and laudanum.]—PROF. F. WÖHLER (as pupil of Berzelius). "Early Recollections of a Chemist."

**Repertoire de Pharmacie,** No. 20.—M. MAURAY. "Pharmacology of Salicylic acid." [Formulæ for the administration of this remedy for various purposes.]—M. YVON.—"On Methylaniline Violet as a Reagent for Biliary Acids in Urine." [Reagent, 1 part in 500 of water. According to the author jaundice-urine changes the violet to red and produces an abundant precipitate; bilirubine, biliverdine, or cholic acid, each for themselves produce no change of color but only a precipitate.]—BURG and DUCOMB. "On the Physiological Action of Copper and its Salts in Animals."

**Repertoire de Pharmacie,** No. 21.—MAGNES-LAHENS. "New Researches on Inhalations of Tar," etc.—LEPAGE. "Note on the Employment of Iodide of Cadmium and Potassium for the Assay of Various Officinal Preparations.—[2.50 gm. KI and 2.80 gm. $CdI_2$ in 50 gm. water,—or, a tenth-normal solution of cadmium iodide alone;—the author, however, only relies upon the appearance of the *bulk* of the precipitate.]—"Preparation, etc., of Monobromated Camphor." [Direct action of bromine at 100° C. upon camphor without pressure or distillation.]—"The Lac-Tree of Japan."

**Dingler's Polytechnisches Journal,** Bd. 218, No. 2.—BIRNBAUM K. and BOMASH.—"On the Behavior of Ammonium Salts towards Bone-black."

**Neues Repertorium für Pharmacie,** Bd. 25, No. 8–9. ULLERSPERGER.—"The History of Pharmacy in Portugal from the Earliest Times."

**Moniteur Scientifique,** Nov.—Five articles on Salicylic Acid; On its Chemistry, its Use as a Preserving Agent for Milk, etc., and its Employment as an Indicator in Acidimetry.—KINGZETT. "On the Formation of Ozone during the Oxidation of Essential Oils."—BECKETT & WRIGHT. "Action of Organic Acids and their Anhydrides upon Natural Alkaloids."—"On the Sulphates of Narceïn and their Derivatives."

# THERAPEUTICS.

### Treatment of Spasmodic Asthma by the Subcutaneous Injection of Morphia.

J. KEITH ANDERSON, M.D., writes to the November number of *The Practitioner* as follows regarding the use hypodermically of morphia for the relief of asthmatic spasms:—"Some six months ago, in a case of spasmodic asthma of long standing, in which the usual antispasmodic and depressant remedies had proved unreliable, I ventured to make trial of the subcutaneous injection of morphia. The results were so extremely satisfactory, that I have applied the same treatment to the cases which have since then come under my care. The plan is so simple and so obvious, that I cannot but think that it must have occurred to others besides myself. Having, however, found no mention of it in the text-books or elsewhere, I am emboldened to present it to the consideration of the profession.

"I have now used the treatment on twelve occasions, and the result in all cases has been a complete and perfect relief from the embarrassment of the respiration. The rapidity with which the distressing symptoms are controlled is very striking. In from five to ten minutes after the injection has been administered, the patient finds himself well, *per saltum*. There is no perceptible interval between the agony of breathlessness of one moment and the perfect calm and rest of the next. I have seen a man who had been laboring to speak—jerking out his words syllable by syllable—suddenly rise to his feet, and, with easy and unembarrassed respiration, finish his remarks in an uninterrupted flow. So soon as the morphia gets fairly into the current of the circulation, that moment the spasm is relaxed, and the patient is at peace, with nothing but his exhaustion to testify to the sufferings he has undergone.

"The dose which I have used has been in all cases one-sixth of a grain of the hydrochlorate of morphia in a strong solution. In no instance has its use been followed by any more unpleasant result than slight nausea. This effect has not occurred on more than one or two occasions, from which I infer that the relaxation of spasm is by no means dependent on its production.

In no attack has there been any tendency to the recurrence of breathlessness after the first effects of the morphia have passed off. I have even been inclined to believe that its use has been succeeded by an unusually long immunity from further attacks.

"I may add that those who have once experienced the rapid and unfailing relief of the subcutaneous injection are no longer content to await the action of the more uncertain remedies to which they had formerly been accustomed to resort."

### The Action of Apomorphia.

WALTER G. SMITH, in his report on Materia Medica and Therapeutics, in the *Dublin Journal of Medical Science*, states that the employment of the new and potent alkaloid, apomorphia, of which an account has been given in former reports, although offering some decided advantages is not without its inconveniences, and even risks, and the following observations are in point. Some months ago Dr. Perriquet, of Benzeville, was led to make frequent use of hydrochlorate of apomorphia in his practice, and within a short space of time provoked vomiting by means of it in eight persons. Each time he injected 1 cgm. (0.15 gr.) of the salt dissolved in water, to the amount of two-thirds of Pravaz's syringe, and each time vomiting uniformly supervened at the end of ten, fifteen, or twenty minutes, without any alarming symptoms. A ninth patient, affected with simple catarrhal sore-throat, was at first (December, 1874) treated by a purgative and gargles. He went on so well that at the end of eight days he resumed work as a road laborer. Two days afterwards he had a suffocative attack, attended with moderate fever. He could scarcely open his mouth, the soft palate was red and tense, the tonsils were enormously swollen, and pus was evidently forming. 1 cgm. of hydrochlorate of apomorphia was injected under the skin of the arm, below the deltoid. At the expiration of ten minutes the patient complained of feeling a desire to sleep, but no inclination to vomit. He then suddenly threw himself backwards, flexed his arms, and uttered some hoarse cries. The lower jaw was so tightly clenched that the tongue depressor, which was introduced between the teeth, was twisted and it was impossible to forcibly extend the flexed forearms. The pulse was very small; there was marked coolness of the skin, and the sounds of the heart could scarcely be distinguished. In a state of complete opisthotonos the man rested on the bed, supported on the neck and heels. This state of things lasted for four or five minutes, when the patient suddenly fell back on the bed saying, "You have caused me severe pain." In a few minutes more the rigidity disappeared, and the man sank into a deep sleep. He slept calmly for two hours, at the end of which M. Perriquet succeeded in opening a tonsillitic abscess. Three days afterwards tonsillotomy was performed, and the operation was followed by tendency to syncope. The man was not subject to epilepsy. The packets of the apomorphia salt were submitted for examination to M. Carville, who certified its excellent quality. Each packet included exactly 1 cgm. and the dose contained in the syringe was not completely dissolved. Similar alarming accidents to that just related have been observed by others, and they appear to have followed especially in those cases in which vomiting had either not been induced, or had been delayed. M. Moelder, to whom this remark is due, has related the history of a man, aged sixty-three, affected with

chronic gastric catarrh, who, ten minutes after injection of 5 mgm. ($\frac{1}{13}$ gr.), was seized with pallor of the face, trembling, confusion of sight, small pulse, profuse perspiration, and inclination to sleep. At the end of twenty minutes he vomited a little; coffee was administered to counteract the somnolence. He was able to walk home in an hour and a half, and, indeed, in none of the cases have the symptoms persisted long. In Dr. Loeb's practice a young man, after the injection of a solution, which had been kept for some time, fell into a state of asphyxia and coma. While endeavoring to draw the tongue out of the mouth, Dr. Loeb provoked copious emesis, followed by immediate subsidence of the grave symptoms. Again, Dr. Prevost, of Geneva, has recorded a case in which he injected subcutaneously three or four milligrammes of apomorphia in a woman suffering from sore throat, with gastric disturbance. A state of collapse, tending to syncope, was produced, which continued for fifteen or twenty minutes, during which the pulse could scarcely be felt, and the pupils were dilated. In this instance the customary vomiting was established at the end of five minutes, and was repeated several times. The patient fell into a deep sleep, which lasted for about half an hour after the period of collapse.—*Dublin Jour. of Med. Sci.*, and *The Practitioner*.

### The Use of Podophyllin.

M. Demarquay having of late made frequent use of this substance at the Maison Municipale de Santé, where a large proportion of the patients are women, M. Merchant, his student, published in the *Bulletin de Thérap.* for August 30th, an account of the results that have been obtained on forty patients to whom it has been administered. Three only resisted its effects, and in these the constipation was rendered obstinate by mechanical obstacles. As a general rule its effects take place about twelve hours after its administration, the most extreme periods on either hand that were observed having been seven and nineteen hours. The medicine acted with little or no pain, either prior or subsequent to the stools; but it was often found that the patient had an inclination for stool without any result. This was especially the case in the subjects of obstinate constipation, and was obviated by increasing the dose, or, better still, by more frequent repetition of the remedy. The stools produced are remarkable for their non-diarrhœic character, being semi-liquid only, and often normal in color and consistence; and podophyllin may be long employed without producing any secretory disturbance in the canal, and without inducing super-purgation, to be followed again by constipation. The medicine may, however, act in this mischievous way if given in too large doses (five to ten centigrammes, or $\frac{3}{4}$ to $1\frac{1}{2}$ gr.), and without bearing due relation to the age of the patient and the degree of constipation. In the stools there is also found a considerable amount of bile when the dose is properly apportioned. The various accidents said by some authors to attend the use of podophyllin (as vertigo, sweating, loss of appetite, vomiting, dysentery, etc.) have not been met with among M. Demarquay's patients, even when the medicine has been continued for a long period. This may be attributed to the small doses given, which have never exceeded six centigrammes ($\frac{9}{10}$ gr.). The formula which, after various trials, has been found most convenient, consists in a pill made of three centigrammes ($\frac{6}{13}$ gr.) of podophyllin, two ($\frac{1}{3}$ gr.), of extract of hyoscyamus, and two of soap. This pill also constitutes the best average dose for an adult. It will sometimes, however, be insufficient in the subjects of habitual constipation, while for children one or two centigrammes ($\frac{1}{8}$ to $\frac{1}{3}$ gr.) suffice. When the three centigrammes ($\frac{6}{13}$ gr.) do not prove sufficient, the dose may be gradually increased, or, what is preferable, the pills may be given oftener, so that one is administered every twelve instead of every twenty-four hours. And when these do not suffice, it will be preferable, in place of increasing the quantity of each dose, to repeat the pill every eight or six hours. At the end of the third day at latest the effect will have been produced, it being also explained to the patient that the medicine is not intended to act as a purgative, but as a remedy against constipation, in order to secure the necessary patience. Stools once secured, the medicine must always be administered at the same time of the day, and the patient acquire the habit of going to stool. Ten or fifteen days may be required for this purpose, and then the doses must be gradually given at more prolonged periods; so that perhaps a month altogether may be required to overcome the constipation.—*Canada Medical Record.*

### The Action of Jaborandi on the Heart.

Mr. Langley describes the following as the main features of the action of jaborandi on the heart. If a few drops of the glycerine solution, or if one of the extracts be injected under the skin of a frog or toad the heart will become red and dilated, and the beat slower. These characteristics increase till the heart is of a dark red color, very much distended in diastole. He has invariably found that the ventricle stops beating before the auricle. According to Vulpian the auricles are the most readily affected; this certainly is not the case if it be taken to mean that the auricular beats are the first to cease. It does, however, not unfrequently happen that the auricles are the first to show the effects distinctly, beating only in every alternate heart-cycle. This has been most frequently observed after the aqueous extract has been given. At a later stage the heart-beats generally become very irregular; at one time the auricles contracting only in every alternate heart-cycle, at another the ventricle, then perhaps a complete stoppage of both, followed by a few normal beats. More-

over, in point of energy the different parts of the heart-beat seem to be quite independent of one another; at one time the auricles contracting feebly, and the ventricle strongly, at another exactly the contrary. But with all these variations the ventricle has in all the many animals that Mr. Langley has examined, been the first to finally cease contracting. The auricles, as a rule, cease contracting before the sinus, but he would hesitate to say that it is always the case; sometimes certainly if the sinus beats at all the beat is confined to the part closely adjoining the auricles, when it is very difficult to tell whether the movement is caused by a contraction nearly synchronous with the auricles or by the auricular contraction alone. Atropia sulphate quickly restores the heart-beat, but with less and less readiness, as the heart has been stopped for a longer time. The restored beats are at first feeble, then get stronger, till an almost or quite normal beat takes place. The auricles show this effect most strikingly, and not unfrequently the auricular beat will be resumed on injection of atropia sulphate, but not the ventricular. Thus it would appear that the auricles have a greater tendency to functional activity than the ventricles; their rhythmic beat is more difficult to stop, and when stopped is more easily set going again than that of the ventricle.—*Journal of Anatomy and Physiology*, and *The Practitioner*.

### Styptic Cotton in the Treatment of Otorrhœa.

Dr. Thomas G. Morton, of Philadelphia, writes to *The Medical Times* that he has used styptic cotton with excellent results in a number of cases of discharge from the ears.

The styptic cotton is prepared as follows: Take a roll of fine jeweller's cotton and thoroughly saturate it in a mixture of Monsel's solution of the subsulphate of iron, diluted with two parts of water; let it stand in the mixture for forty-eight hours; press the liquid out, and dry in a warm room, then pick or card out in fine shreds. It is better to make it in small quantities, as there seems to be some change in the cotton when kept for any length of time; losing its texture and breaking up in a fine powder when handled, thus rendering it unfit for application. In the case cited, the first plug was removed the day following its insertion, showing a healthier condition of the meatus, with marked lessening of the discharge; all the pus was absorbed by the cotton, which left the drum and canal quite clean; at the end of the first week only a slight moisture remained, and in a fortnight the cure was complete, and has so continued; the opening in the tympanum closed up at the same time.

Encouraged by success in this instance, he has since used no other treatment in a very large number of cases of otorrhœa, and always with the same excellent result.

Before using the cotton, the ear should each time be thoroughly cleansed with tepid water, with a Davidson's syringe, and the canal then wiped out with common cotton; then a portion of the "styptic cotton" should be rolled upon an instrument having a screw shaped extremity, an illustration of which accompanies the original article. The plug of cotton being at least the length and width of the canal and carried in until the plug rests close to, but not in contact with, the drum; by reversing the screw movement the instrument is easily withdrawn, leaving the cotton behind.

The first few plugs should be changed daily, then, according to the lessening of the discharge, not so frequently.

He has not observed any trouble or pain arise from the use of the styptic cotton, while it usually has an anodyne effect.

[In preparing this cotton, a precaution not mentioned by Dr. Morton consists in carefully cleansing it with caustic soda to remove adherent oil, and subsequent washing to get rid of the alkali.]

### Tincture of Arnica.

Dr. Walter G. Smith points out (*Dublin Medical Journal*, September, 1875) that Dr. James C. White is convinced, from his own experience, that not only is arnica valueless as an actual remedy, but that it is often positively noxious. He relates (*Boston Medical and Surgical Journal*, January 21, 1875) three cases in which the application of an arnica lotion to excoriations occasioned severe outbreaks of acute inflammation, accompanied by development of papules, vesicles, excoriations, crusts, and scales in regular sequence. The local symptoms were intense itching and some degree of burning. The mischief-making powers of arnica are much more frequent than is commonly supposed; and if its deleterious and toxic effects are seldom recognized, it is because all the disturbances really due to this so-called remedy are laid to the account of the injury. Dr. White coincides with Hebra and Tilbury Fox in ascribing the feeble therapeutic properties of tincture of arnica solely to the presence of the alcohol (see Garrod's *Materia Medica*, 3d ed., p. 267). The dangerous qualities of arnica have also been appreciated in France (*Rev. de Thér. Méd.-Chir.*, No. 9, 1875).

The following remarks, taken from Dr. Charles Phillips's *Materia Medica and Therapeutics*, 1874, throw considerable light on the discrepant statements which have been made respecting the effects of arnica. The ingredient in arnica long supposed to be of most consequence was *arnicine*, an amorphous bitter substance, almost insoluble in water, but freely soluble in alcohol and ether; or else the ethereal oil, which is also insoluble in water. For a variety of reasons it is now probable that neither arnicine nor the oil, but *trimethylamine*, an organic alkali, is the really useful constituent of arnica. Trimethylamine, $C_3H_9N$, is a clear, colorless fluid, very volatile, and freely soluble in water, alcohol, and ether.

"The external effect of arnica involves important questions; for, while it is known that many persons have found it an excellent application for bruises and for wounds, other observers have complained that it produces either an actual erysipelas, or a peculiar violet-colored eruption, attended by great heat and pain. I venture to affirm that these are physiological consequences of the alcoholic, and not of the aqueous solution, which latter contains neither arnicine nor the oil. I have never seen inflammatory consequences follow the application of the purely aqueous lotion to wounds or bruises."—(p. 306.)

"For external bruises and cuts arnica is, undoubtedly, very useful; and, as already observed, the mischances that have attended its use have probably resulted from the fact that the tincture, containing arnicine and the volatile oil, has been employed. The infusion or decoction alone should be used, and it would be better to give up employing all liniments and lotions in which the tincture is present."—(p. 309.)—*London Med. Record.*

### Treatment of Pruritus Vulvæ by Nitrate of Alumina.

Dr. H. Z. Gill, of Jerseyville, Ill. (*St. Louis Med. and Surg. Jour.*), has had favorable results follow the use of nitrate of alumina in cases of pruritus vulvæ. He refers especially to such cases as are coincident with pregnancy:—"Judging from my own observation these are not rare, and may *demand* relief. There may be a discharge, either slight or more free, and the irritation may arise from this source; whatever the cause may be, the nitrate of alumina has given more satisfaction than any other remedy or combination I have prescribed in quite a number of cases.

"Indeed patients have repeatedly told me it acted like a charm, relieving them immediately, and that they could not do without it.

"The form in which I have used it is from four to six grains (2½ to 3¾ decagrammes) to the ounce of soft water, using it as a vaginal injection or external wash. I ordinarily direct the patient to take a teaspoonful (beginning with rather less at first) of the powder, put it into a pint, or a pint and a half of soft water, and use as a wash or vaginal injection once, or, if necessary, twice a day. In hot weather it may be needed twice a day."

### Collodion in Treatment of Carious Teeth.

Dr. Lardier advises, in *L' Union Medicale*, to drop some collodion into carious teeth, after the latter have been cleaned and dried. The liquid collodion exactly fills the cavity of the tooth; the ether evaporates, and narcotizes the nervous twigs. By solidifying, the collodion protects the tooth from the contact of the air. Dr. Lardier states that he has thus succeeded in relieving many patients.

### Use of Apocynum Cannabinum in Dropsies.

Dr. Walter Lambert writes to the *Canada Lancet* that during a practice of nineteen years he has often prescribed milk-weed for the relief of dropsies, and with success. He says:—"I always employ the root, and have it dug fresh from the earth, and advise a strong infusion to be made, of which the patient is directed to drink freely, so as to procure two or three watery evacuations from the bowels during the day. It is true that it has sometimes failed to meet my expectations and wishes, but this might be partially accounted for by the root not having been gathered at the proper season of the year; and in some cases its failure has doubtless been due to the origin of the malady. I have found that it is more likely to prove of service in hepatic and cardiac dropsies, and its virtues to be owing to its alterative action on the glandular system, as well as its hydragogue properties, which will not fail to put in an appearance when the drug is administered in sufficient doses."

### Failure of Bromide of Iron in Chorea.

Dr. Charles K. Mills, referring to a recent recommendation of this remedy by Prof. Da Costa, writes to *The Medical Times* to say that he has tested the remedy in twelve cases, and has been entirely disappointed in the preparation. In no case was any permanent benefit derived from its use. In two instances slight apparent improvement was noticed, but it was only transient in character. It was given, usually, in plain syrup and water, commencing with five grains three times a day, as recommended, and rapidly increasing the dose to twenty. The treatment was continued from two to four weeks. Twenty grains very generally caused vomiting. Most of the cases in which the bromide of iron failed were afterwards cured either by arsenic, arsenic and iron, or cimicifuga, assisted by hygienic measures. The following are Dr. Mills's conclusions:—

"In local chorea or clonic muscular spasm, for which this remedy is advised after the failure of other methods of treatment, I have not found it of any value. Very rarely indeed will any drug improve these local affections.

"Dr. J. B. Rudderow informs me that he has used the preparation under consideration without success in several cases of chorea.

"In addition to the twelve cases of chorea referred to, I have also unsuccessfully employed the bromide in a few cases of hysteria and epilepsy. Theoretically, the combination of bromide and iron would appear to be a good one for the treatment of a neurosis like chorea, and it is well known that any of the numerous remedies which have been employed successfully in this disease may sometimes prove futile; but the failure of the bromide of iron has been so marked in my experience that I have thought it worth while briefly to call attention to the fact."

### Chloroform in Malaria.

Dr. Jos. Berens reports in *The Medical Times* four cases in which good results followed the internal administration of chloroform in "chills and fever."

He calls attention to the absolute desuetude into which this remedy has fallen, together with the incontrovertible fact that the potency of quinia is not invariably sustained.

In the cases reported the remedy was given in twenty drop to drachm doses hourly for three to six hours preceding the expected attack.

### Gelsemium in Neuralgia.

In *The Lancet* of November 6, 1875, Spencer Thompson, M.D., writes favorably of the employment of the tincture of Gelsemium sempervirens in neuralgias. The remedy has been used by Dr. Thompson, or under his authority, in at least forty cases, the class most benefited by it being those in which the branches of the trifacial are involved, particularly the inferior maxillary. It is most especially useful when the pain is referred to the teeth or alveoli. Dr. Thompson thinks that the doses generally prescribed are too small, and invariably prescribes twenty minims of the tincture as a first dose, to be repeated in an hour and a half if relief does not follow. He has rarely had occasion to order a third dose.

### Poisoning by Laburnum Root.

The laburnum-tree (*Cytisus Laburnum*) of Europe has long been known by the people to be actively poisonous, and in 1865 Husemann and Marmé discovered in it poisonous alkaloids, cytisin and laburnine. The exact properties of this have not been determined, but a recent wholesale poisoning in Forest Gate School, England, will probably draw a good deal of attention to it. The radices resemble somewhat stick-liquorice, and fifty-eight boys, probably mistaking the roots of an old laburnum-tree for their favorite sweet, ate freely of them. In a short time they were affected with symptoms of narcotic poisoning, varying in severity from simple sleepiness to complete stupor. There was no complaint of pain or burning of mouth, throat, or stomach, nor was there any sickness until emetics were given. When they arrived at the Infirmary they were pale, cold, and staggered about; their pupils were somewat dilated. The sleepiness is said to have been intense, the boys falling to sleep even while in the act of vomiting, some with the basins in their hands, others standing at the sink. Two boys who were much worse than the rest, after freely vomiting, were insensible, and showed very strange waving motions of the arms to and fro, whilst now and then their legs, first one and then the other, were convulsively drawn up; in one of them there was slight frothing at the mouth. Their pupils, as well as those of several less seriously affected, were unequally dilated. These two boys were strong and robust, and thirteen years old, and, so far as could be made out by subsequent inquiries, could not have chewed more than half an ounce of the root. Ten hours after taking the poison they went to sleep whilst being walked about the yard, after having had cold douches, strong coffee, etc.

All the cases speedily recovered, and on the next day showed hardly any traces of injury. As intense drowsiness ending in stupor was the most prominent symptom in these cases, it is possible that cytisin, on investigation, might prove to be a valuable hypnotic.—*Medical Times.*

### Nitrite of Amyl in Neuralgic Affections.

*The Practitioner* contains letters relative to the curative effects of inhalations of this drug, from Dr. George H. Evans and Dr. R. A. Douglas-Lithgow. The former reports three cases of facial neuralgia in anæmic females in which marked, and in one case permanent relief followed the use of the remedy. "In one instance a sister of one of the patients, who was not anæmic, incautiously, one day, sniffed at the amyl bottle, probably because I had especially cautioned my patient against allowing any of her sisters to use it; and immediately her face became most painfully flushed, and she felt sufficiently uncomfortable to prevent her repeating the experiment. I think, from what I have seen of its use, that anæmic people, as one might expect, can bear very much larger doses of amyl than those who are not anæmic."

Dr. Douglas-Lithgow has employed nitrite of amyl since 1869 for the relief of nervous cephalalgia, causing the patient to inhale a couple of drops from the palm of the hand. In several instances the dose has had to be increased or repeated. When due care had been exercised in the selection of cases, he had never found the remedy fail to produce entire and almost immediate relief.

### Treatment of Tape-Worm by Creosote.

Mr. Brickwell states that about fifteen years ago a man discharged from the army with lung disease and tape-worm came under his notice, when it occurred to him that the destructive properties of creosote to the lower grades of animal life might be made available for killing or so weakening the vitality of intestinal worms that they could easily be got rid of. He therefore gave him some three times a day, shortly after meals, for six days, and on the seventh a dose of castor-oil and turpentine, which brought away a worm twelve yards long. He has since tried creosote for destroying round worms with great success. In one case a large mass of more than a hundred worms of all sizes came away, and the patient has not been further troubled by them. He has not succeeded so well with the troublesome thread-worms of adults, but has some doubts if the remedy were fairly tried.—*Medical Times and Gazette*, and *Practitioner.*

### Gasoline as a Disinfectant.

In a lecture on deodorizers and disinfectants delivered by Dr. John Day, to the members of the School of Science, at Geelong, reported in the *Medical Times and Gazette*, the lecturer stated that the great value of peroxide of hydrogen as a deodorizer was only just beginning to be understood. Dr. Day has discovered the presence of the agent, spontaneously generated, in a vast number of substances in daily use, such as all fats and fatty or expressed oils; nearly all perfumes; most, if not all essential oils; kerosene, gasoline, and benzine, and deal and pine woods. In many respects gasoline is the best disinfectant with which he is acquainted. In addition to being highly volatile, it possesses the property either of generating peroxide of hydrogen, or of originally forming it and storing it up until brought into contact with any of those oxidizable substances for which it has an affinity. One of these two actions, he could not say which, takes place long after the gasoline has passed away. When unglazed paper, or any porous substance, is brushed over with gasoline, it will at once give the reaction of peroxide of hydrogen, and continue to do so for a year or more. It is thus persistent in its action, which gives it an immense value over other disinfectants. He recommends that books, newspapers, and the like, which have been used by fever-patients or kept in their apartments, be disinfected by brushing them over with gasoline. The most delicate wall-paper may be brushed over with it without injury, as may also articles of wearing apparel. The hands may be disinfected by brushing them over with the same agent and allowing them to dry in the air. The only drawback to its use is its inflammability.

### Raw Onions as a Diuretic.

Recently at a meeting of the Medical Chirurgical Society, as reported in the *Edinburgh Medical Journal* for September, 1875, Dr. G. W. Balfour gave an account of the patients who had been much benefited by the use of large quantities of raw onions, which had acted as a diuretic. The first case was that of a woman who had suffered from large white kidney and constriction of the mitral valve. Her abdomen and legs had been tapped several times, but after using the remedy given above, she had been free from dropsy for two years, although still suffering from albuminuria. Of the other two, one suffered from cardiac disease, cirrhotic liver, and ascites; the other had ascites depending on tumor of the liver. In both cases the remedy had been given with good results. Both had been previously tapped, and purgatives and diuretics alike failed to give relief. Finding that the fluid was steadily re-accumulating, the patient had recourse to onions. Under their use the amount of urine passed rose in a few days from ten ounces to a hundred ounces.

### Action of Iron on Nutrition.

Rabuteau has carried out a series of researches in his own person relative to the effect of iron upon tissue-change.

Each series of experiments extended over fifteen days, during which he took the same sort of nourishment, exercise, etc. During the first five days the daily excretion was exactly determined. From the sixth to the tenth day, then, two grains of chloride of iron were taken daily, the observations being continued, and during the last five days the estimation of iron excreted was included.

It appeared that the amount of urine was unchanged, its acidity was decidedly increased, during the administration of the iron. This fact is sufficient to justify the use of ferruginous preparations in cases of phosphatic urine, lithiasis, and oxaluria, and to place in a correct light the favorable results observed from the iron treatment in such cases. The amount of solids and the urea in the urine were increased about ten per cent.; it thus appears that the administration of chloride of iron, even in moderate doses, increases tissue-change not inconsiderably. Rabuteau alludes to the rise of body temperature observed by Pourowski while taking iron, indicating increased oxidation, which is also indicated by the increase in urea.—*Comptes-Rendus.*

### Eserine Disks in Tic, etc.

Dr. W. Munro has found that gelatine disks containing one twenty-fifth of a kilogramme (.0006 grain) of eserine are of great use in the treatment of tic, being sufficient, as a rule, if there is no persistent cause, to remove the painful element of the disease in from five to fifteen minutes. He mentions that he has used extract of Calabar bean with advantage as a sudorific in cases of incipient bronchitis, congestion of the liver, phthisis with dry hot skin, etc., being always able to bring down the temperature two or three degrees, when sufficient doses were used; such dose being, for an ordinary adult, one-fifth, or at least one-sixth, of a grain (10¾ to 13 milligrammes), as a minimum, which can be safely repeated every four to six hours till the desired effect is produced, so long as the patient is carefully watched.—*British Medical Journal.*

### Therapeutic Action of Chlorate of Potash.

In one section of a long communication on this subject, which is not yet concluded, M. Isambert demonstrates very satisfactorily that chlorate of potash does not undergo any change in passing through the body, neither losing oxygen nor chlorine, but being eliminated *en masse* by the secretions. This view is supported by the observations and experiments of MM. Laborde, Milton, and Gambarini, but it is opposed on theoretical grounds by MM. Berthelot and Gubler, who believed that, like the iodides, it undergoes decomposition.—*Gazette Médicale de Paris.*

### Digestive Properties of the Juice of the Papaw-Fruit.

It has long been known to the inhabitants of India, Africa and South America, that tough meat may be made very tender by enveloping it for some time in the leaves of the papaw (Carica papaya L.), or by adding a little of the milky juice of the fruit to beef while cooking. In some places, even the evaporation of the tree is believed to be effective, and meat or fowl is suspended from the crown of the tree. Dr. C. Roy has lately experimented with the dried juice of the fruit, and found that it exerts a powerful disintegrating and solvent action upon fibrin, in fact, that it has strong digestive properties, similar to the gastric juice of the animal stomach. On adding 3 gm. of it to 10 gm. finely cut beef and 8 gm. water, and heating for 10 minutes, the beef appeared almost entirely dissolved; and the same result ensued at the common temperature, only in this case it required a little longer time. Under the microscope the fibres of the beef appeared entirely separated, and the magma was nearly alive with vibriones. The same effect was noticed by allowing it to act upon coagulated albumen or cartilaginous tissue, and Dr. Roy supposes that this juice might be found to be of value as an aid in sluggish digestion, and perhaps be of service for the kitchen.—*Welthandel*, Dec., 1875.

### Citric Acid in the Treatment of Cancer.

In *The British Medical Journal* of November 27th, John H. Wood, M.D., reports a case of cancer of the œsophagus and cardiac orifice of the stomach, in which the symptoms were, for a time, very much relieved by the use of citric acid in large doses, combining it, on Dr. Sidney Ringer's plan, with wine of ipecac in minim doses.

### Hypodermic Injection of Pure Water.

Dr. Laffitte has employed subcutaneous injections of pure water in a great variety of diseases attended with pain. He has obtained as much success in the relief of this latter element as when he employed injections of morphia, and attributes it to the compression of the terminal nervous filament by the injected water.—*Le Mouvement Médical.*

### Gelsemium Sempervirens as a Remedy for Cough.

The use of this remedy for cough is recommended by Dr. J. R. Thompson in the *Brit. Med. Jour.* of Oct. 16th. He has administered it recently to a large number of patients suffering from pulmonary disease—as, for example, chronic phthisis—as a cough sedative. The tincture is given in five-minim doses. When much bronchial irritation existed he has combined it with bromide of ammonium, tincture of squills, and syrup of codeia. He claims that his results show that gelsemium has a marked power in subduing cough, that it acts probably as a nervous sedative, that it is useful when other sedatives have failed, that it seldom produces any unpleasant general effect, and that the kinds of cough in which it may be administered with advantage are very varied.

### The Action of Cod-Liver Oil.

Buchheim maintains that the old opinion, that cod-liver oil was valuable as a curative agent in consequence of the iodine that it contains, is unreliable, since it contains actually less and not more iodine than other marine products, as deep-sea fish, oysters, etc.

The view also that it aids in the formation of some of the constituents of the bile meets with little favor. It would appear, rather, that the value of cod-liver oil is due to its being an easily digestible fat of high nutritive value. Buchheim finds that the oil has an acid reaction, and contains, in addition to the fatty glycerides, free fatty acids (oleic, stearic, and palmitic), the quantities of which vary in the different kinds of oil, but amount in the clear variety to about five per cent.

No biliary matters are present in the oil. Its value, according to Buchheim, depends on the presence of the free fatty acids, since the absorption of fats is preceded, to a certain extent at least, by their disintegration into glycerin and fatty acids, and as the latter are introduced in cod-liver oil in their free condition, and thus easily unite with the alkalies of the intestinal juices to form soluble and easily absorbed soaps and combinations, a part of the digestive work is spared, which is of importance for weak persons with deficient power of producing the gastric juices.

When cod-liver oil cannot be taken, the use of the free fatty acids is indicated, and these might be advantageously ordered without any admixture of glycerides. Unfortunately, however, stearic and palmitic acids are solid at the ordinary temperature of the body, whilst oleic acid, though fluid, easily becomes rancid, and can at present be obtained only in small quantities.—*The Practitioner.*

### Atropia as a Test of Death.

Statsarzt Michaelis has found that the action of atropia upon the pupil is not a reliable test of death. In several cases its influence was very marked in recent corpses.—*Wiener Med. Presse.*

### Guaiacum as a Remedy for Chronic Hoarseness.

In chronic hoarseness arising from thickening of the vocal cords and adjacent membrane, the ammoniated tincture of guaiacum is often a very efficacious remedy. It may be mixed with equal parts of the syrup of senega, and a teaspoonful of the mixture given two or three times daily. —*Am. Practitioner.*

# NEW REMEDIES.

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## EDITORIAL.

SINCE the completion of the fourth volume of NEW REMEDIES its publishers have determined to make it a monthly, and to issue it in the present shape instead of the octavo form in which it appeared when a quarterly. A change, too, it will be observed, has been made in the contents. While space will be given as before to subjects related to materia medica and therapeutics, the department of pharmacy, which in former volumes was incorporated with materia medica, becomes the chief department of the journal. To further this change and increase the value of this department, the editor has associated with himself Mr. Charles Rice, well-known through his connection with the College of Pharmacy and the Department of Public Charities and Correction, of this city, as an able chemist and practical pharmacist.

Although there will be no special department devoted to chemistry, so much of the science as relates to the subjects embraced by the journal will receive early notice. The official bulletins of new patents, labels, and trade-marks, together with new laws, will be republished as far as they relate to pharmacy and the practice of medicine and surgery, and as fully as their importance and our space will permit.

New books on Chemistry, Toxicology, Pharmacy, Botany, Materia Medica, and Therapeutics will be noticed, and questions which are germain to the character of the journal and come from *bonâ-fide* correspondents will be answered either by ourselves or by the best obtainable authorities. Pains will be taken to collect such items of professional news as will interest the subscribers to the journal, and increased care will be taken to publish only such formulæ and prescriptions as we have good reason to believe are reliable. A department will be devoted to the description and illustration of new or recently modified surgical and medical instruments, pharmaceutical and chemical appliances, and the novelties which may be included under the title of "druggists' sundries."

Nearly all of the wholesale manufacturers of drugs and chemicals are in the habit of sending lists of prices current to those who are desirous of receiving them, but even when obtained so direct they are of but little value as an indication of what the retail dealer will have to pay for his sup-

plies, and serve only to indicate, to any one who has the time and patience to study them, the fluctuations that have occurred in the market. As a means of presenting this information in a more condensed and practical form, we shall attempt to give in each issue a retrospect of the market for the previous month and a prognosis of the changes in supply and prices which are likely to occur. We hoped to include such a report in the present one, but the labor incident to getting out the first number has prevented the completion of such an article in time for publication.

**A Table for Reducing Troy Weight to Grammes.**

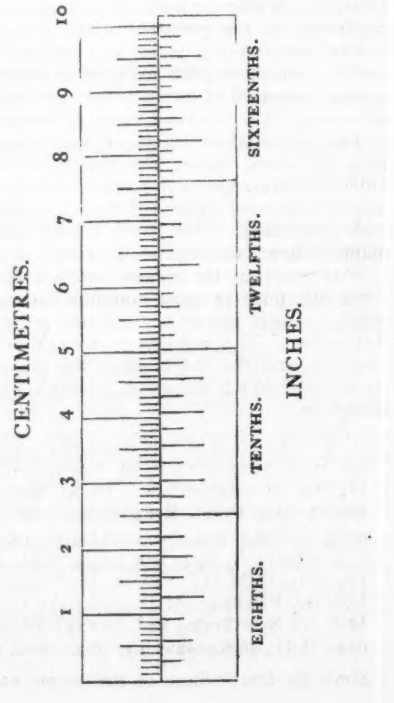
| Troy Weights. | Gramme Weights. | Troy Weights. | Gramme Weights. |
|---|---|---|---|
| Grain $\frac{1}{16}$ | 0.006 | Grains 80 (℈jv) | 5.17 |
| " $\frac{1}{8}$ | 0.008 | " 90 (ʒ jß) | 5.82 |
| " $\frac{1}{6}$ | 0.01 | " 96 | 6.2 |
| " $\frac{1}{5}$ | 0.012 | " 100 (℈v) | 6.47 |
| " $\frac{1}{4}$ | 0.016 | " 120 (ʒ ij) | 7.76 |
| " $\frac{1}{3}$ | 0.02 | " 150 (ʒ ijß) | 9.7 |
| " $\frac{1}{2}$ | 0.03 | " 160 | 10.35 |
| " $\frac{2}{3}$ | 0.04 | " 180 (ʒ iij) | 11.65 |
| " $\frac{3}{4}$ | 0.048 | " 200 | 12.94 |
| " 1 | 0.06 | " 240 (℥ ß) | 15.53 |
| " 2 | 0.13 | Drachms 5 (ʒ v) | 19.41 |
| " 3 | 0.19 | " 5½ (ʒ vß) | 21.35 |
| " 4 | 0.26 | " 6 (ʒ vj) | 23.29 |
| " 5 | 0.3 | " 7 (ʒ vij) | 27.17 |
| " 6 | 0.39 | " 8 (℥ j) | 31. |
| " 7 | 0.45 | " 9 (ʒ jx) | 34.94 |
| " 8 | 0.5 | " 10 (ʒ x) | 38.82 |
| " 9 | 0.59 | " 12 (℥ jß) | 46.58 |
| " 10 (℈ß) | 0.6 | " 14 (ʒ xjv) | 54.35 |
| " 12 | 0.78 | " 16 (℥ ij) | 62.1 |
| " 14 | 0.9 | " 18 (ʒ xviij) | 69.88 |
| " 15 | 0.98 | " 20 (℥ ijß) | 77.6 |
| " 16 | 1.03 | " 24 (℥ iij) | 93. |
| " 18 | 1.16 | Ounces 3½ (℥ iij ʒ) | 108.7 |
| " 20 (℈j) | 1.29 | " 4 (℥ jv) | 124.2 |
| " 24 | 1.55 | " 4½ (℥ jvß) | 139 8 |
| " 30 (ʒ ß) | 1.94 | " 5 (℥ v) | 155.3 |
| " 32 | 2.07 | " 5½ (℥ vß) | 170.8 |
| " 36 | 2.33 | " 6 (℥ vj) | 186.3 |
| " 40 (℈ij) | 2.59 | " 6½ (℥ vjß) | 201.9 |
| " 48 | 3.1 | " 7 (℥ vij) | 217.4 |
| " 50 (℈ijß) | 3.23 | " 8 (℥ viij) | 248.4 |
| " 60 (ʒ j) | 3.88 | " 9 (℥ jx) | 279.5 |
| " 72 | 4.66 | " 10 (℥ x) | 310.6 |

Another change which we shall endeavor to carry out will consist in the use of the metric system of weights, measures, and temperature, when it is practicable to do so; in which cases we shall give the amounts as commonly stated in parentheses. In undertaking this step we believe that we are justified by the opinions of the majority of pharmacists and physicians, and since it has been proposed to make this centennial year a starting point for a reform in our system, we shall endeavor to add to the movement whatever weight may attach to our personal example.

To aid our readers in supplying any deficiencies which may result from our oversight, and to enable them to become familiar with the relative proportions of the two systems, we give a table for reducing troy weights to grammes, and a scale which shows the correspondence between the divisions of the English inch and the centimetre of the metric system, and shall publish other tables and scales in future numbers.

We shall also adopt the new chemical nomenclature, and shall take such liberties with the articles sent us for publication or transposed from the columns of other journals, as shall be needed to make our practice consistent with this rule. We shall take similar liberty with the medical Latin of the period, and with the wording of formulæ and prescriptions.

As much as possible the abstracts and translations of articles appearing in our exchanges will be made from the originals, and at the end of each department we shall attempt to include the titles of such papers as cannot be abbreviated with justice to their contents, or for which we have no room in our columns. By this means we hope to furnish our subscribers with the latest intelligence obtainable.



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VOL. X.: DISEASES OF THE FEMALE SEXUAL ORGANS. By PROF. CARL SCHROEDER, of Erlangen, Bavaria. Translated by EDWARD W. SCHAUFFLER, M.D., of Kansas City, Mo.; LEONARD WHEELER, M.D., of Worcester, Mass.; WILLIAM L. RICHARDSON, M.D., of Boston, Mass.; and EDWARD B. BRONSON, M.D., J. HAVEN EMERSON, M.D., and PAUL F. MUNDÉ, M.D., of New York. 8vo, pp. 875.

THE entire volume is a translation of the work by Professor Schroeder, who is already known not only by his contributions to German medical periodicals, but also by his "Manual of Midwifery," published in this country by Appleton & Co. in 1873, from a partial translation by Dr. Charles H. Carter, of London. The volume is illustrated with one hundred and forty-seven woodcuts, most of which are original with the German edition, and, although somewhat diagrammatic, are admirably adapted for their purpose.

This work by Prof. Schroeder must have been written originally to meet a want which existed in Germany, or else a treatise on a subject so closely bordering on the province of the surgeon could hardly have found a place in a medical encyclopædia; and the republication of it in New York, unless possessed of merits more than ordinary, is very much like "carrying coals to Newcastle."

The examination which we have been able to give the work leaves the impression that the author's knowledge of the subject—which no one will question—is exceeded by his acquaintance with authorities. The style is like that of the manual referred to: concise, but clear and readable.

With propriety the greatest space is devoted to those affections of most common occurrence, or which in their nature or treatment are yet under discussion. The references to authorities are very full, and the index, when the peculiarity of its arrangement is mastered, is very accurate and complete.

VOL. V.: DISEASES OF THE RESPIRATORY ORGANS. By PROF. JUERGENSEN, of Tuebingen; PROF. HERTZ, of Amsterdam; PROF. RUEHLE, of Bonn; and PROF. RINDFLEISCH, of Wuertzburg. Translated by GERALD F. YEO, M.D., of London; A. BRAYTON BALL, M.D., FRANCIS DELAFIELD, M.D., FRANK P. FOSTER, M.D., EDWARD FRANKEL, M.D., and JOHN C. JAY, JR., M.D., of New York; and EDWARD W. SCHAUFFLER, M.D., of Kansas City, Mo. 8vo, pp. 712.

Since the first volume of this series none have appeared which are of more interest, either in the nature of the subject or the manner in which it is treated, than this one on the diseases of the respiratory organs.

The chapter on Croupous Pneumonia, Catarrhal Pneumonia, Hypostatic Processes in the Lungs, and Embolic Pneumonia, by Professor Juergensen, embraces 259 pages. The first portion, on Croupous Pneumonia, is especially interesting. The affection is pronounced to be "a constitutional disease, and is not dependent upon a local cause. The pulmonary inflammation is merely the chief symptom, and the morbid phenomena are not due to the local affection. The hypothesis of a morbific cause is indispensable. Croupous pneumonia belongs to the group of infectious diseases." The writer also advances the proposition, that "The danger in croupous pneumonia threatens principally the heart of the patient. Death results from insufficiency of the heart." The treatment recommended is directed chiefly to reducing the temperature and sustaining the power of the heart. For the former, cold bathing and quinine; for the latter, camphor and alcohol are advised. As an evidence of the individuality which the writer infuses into his work, we will quote once more: "If we bear in mind also that many cases of pneumonia present very few of the symptoms which the text-books press into the foreground of their vivid pictures of the fully developed disease as it occurs in vigorous adults, we shall understand why pneumonia so often remains undiagnosticated. The physician who has a chest of drawers made with the labels 'gastric fever,' 'rheumatic fever,' etc., who has a large practice among children suffering with 'worms,' or 'convulsions,' and who loses many of his patients from 'senile debility,' may rest assured that many of these cases have been pneumonia."

One of the causes of pneumonia which of late has been discussed, but regarding which we see no mention, is poisoning by sewer-gas.

Professor Hertz contributes the chapter on Anæmia, Hyperæmia, and Œdema of the Lungs; Hemorrhages, Atelectasis, Collapse, Atrophy, Emphysema, Hypertrophy, Gangrene, New Formations, and Parasites of the Lungs.

The occurrence of hemorrhage in some cases by passage of blood-corpuscles through the walls of the capillaries without a rupture of the latter is recognized, and is said to depend upon changes which have taken place in the tubes as a result of cutting off their blood supply and, consequently, their nourishment. In the treatment of emphysema, prominence is given to the value of inspirations of compressed air and expirations into a rarefied atmosphere.

Prof. Ruehle contributes the articles on Pulmonary Consumption and Acute Miliary Tuberculosis; the latter, though relatively short, containing about all we know, as yet, concerning the disease in question.

The last chapter, by Rindfleisch, on Chronic and

Acute Tuberculosis, is as thorough and satisfactory as are the other works of this writer, who needs no recommendation, and this portion of the work is well illustrated with woodcuts.

The excellence of volumes like this one cannot fail to make the encyclopædia a treasure for its possessor.

LESSONS ON PRESCRIPTIONS AND THE ART OF PRESCRIBING. By W. HANDSEL GRIFFITHS, Ph.D., L.R.C.P.E., etc. London: Macmillan & Co. 1875. 12mo, pp. 150. $1.25.

ALTHOUGH a little book, this is a very valuable one. In a small space is contained a great deal of the sort of information which advanced students and practitioners are most in need of. It is no *vade mecum* of prescriptions suited to all complaints and forms of remedies, but is an excellent attempt to teach the principles which underlie the composition of formulæ for the treatment of disease. It is based, to be sure, upon the preparations of the Ph. Br., but there are very few practitioners who could not improve their knowledge of the art of prescribing by a careful reading of its chapters.

A TREATISE ON HUMAN PHYSIOLOGY. Designed for the Use of Students and Practitioners of Medicine. By JOHN C. DALTON, M.D., etc. Sixth Edition, revised and enlarged. With three hundred and sixteen illustrations. Philadelphia: Henry C. Lea. 1875. 8vo, pp. 825.

THIS edition contains over one hundred pages more than the previous one, and presents evidences throughout of the most thorough revision. New matter has been added to replace that left out, and in some chapters, especially those devoted to the nervous system, the amount of increase is very considerable. Additional space has been devoted to physiological chemistry. The new chemical nomenclature has been substituted for the old form, and the metric system of weights, measures, and temperature has been adopted. The book is now no longer open to the criticism made upon its fourth edition, that it had not kept pace with the development of the science, and that in several instances it had failed to recognize some of the most important facts that histological researches have given us of late years. This edition is, however, unexceptionable, and furnishes the student or practitioner of medicine all that could be desired or expected in a treatise of the size.

Considerable changes in the chapter on Proximate Principles have been introduced; coloring matters and crystallizable nitrogenous matters being assigned separate classes, making five instead of three, as arranged by Kirke, Flint, and others, and in the last edition. We have looked through the chapters on Food, Digestion, Absorption, Bile, and Blood, and find them almost entirely rearranged and re-written, so much so, in fact, that the book may be said to be a new one.

## NEW BOOKS.

**Atkinson** (E., Ph.D., F.C.S) Elementary Treatise on Physics, Experimental and Applied. 7th Ed.

**Attfield** ( ). Chemistry; General, Medical and Pharmaceutical. 6th Ed., post 8vo, pp. 780.

**Bentley** (Robert, and Henry Trimen). Medicinal Plants. Being a Description, with Original Figures, of the Principal Plants employed in Medicine, with an account of their Properties and Uses. In monthly parts of 8 col. plates. Small 4to.

**Bernays** (Albert). Chemistry. Illustrated (Manuals of Elementary Science). 12mo, pp. 128.

**Biddle** (John B., M.D.). Materia Medica for the Use of Students. 7th Ed., revised and enlarged, with new illustrations. 8vo, pp. 454.

**Bentley** (Prof. ). Botany. Society for Promoting Christian Knowledge.

**Brunton** (T. Lauder). Experimental Investigation of the Action of Medicines. Reprinted from the *British Medical Journal*. 8vo, pp. 92.

**Cazenave** (Dr. ). Recherches et extraction des alcaloïdes découverte de la ptérocarpine. 8vo.

**Chemical** Manufacturers (The). Directory of England and Scotland, supplemented by some of the Irish Firms. Being a list of the principal Manufacturers of Chemicals used in Commerce, Medicine, Agriculture, and the Fine Arts, for 1876. 8vo, pp. 48.

**Cohn** (Dr. Ferdinand). Beiträge zur Biologie der Pflanzen. 3d vol.

**Cornell** (Dr. W. M.). The Handy Home Book of Five Hundred valuable Medical Recipes for all Diseases, with Practical Household Receipts. Sq. fcap., 8vo, bd.

**Defresne** (Th.). Recherches expérimentales sur le rôle physiologique et thérapeutique de la pancreatine. 18mo, pp. 103.

**Duboué** (de Paul). De quelques principes fondamentaux de la thérapeutique, applications pratiques, recherches sur les propriétés thérapeutiques du sulfate de quinine, de l'eau froide, de l'arsenic, du seigle ergoté, du tannin et du permanganate de potasse, de la pathogénie des lésions morbides et du traitement rationnel du choléra. 8vo.

**Ducrocq.** Recherches expérimentales sur l'action physiologique de la respiration de l'air comprimé. 8vo.

**Fairholt** (W. F., F.S.A.). Tobacco; its History and Association. Including an Account of the Plant and its Manufacture, with its Modes of Use in all Countries. With 100 illustrations.

**Fleury** (Dr. Armand de). Leçons de thérapeutique générale et de pharmacodynamie. 8vo.

**Gallipe** (Dr. L. W. V.). Étude Toxicologique sur le cuivre et ses composés. 8vo, pp. 168.

**Gill** (C. Haughton). Chemistry for Schools. An Introduction to the Practical Study of Chemistry. 3d Ed., 12mo, pp. 320.

**Guthrie** (Frederick). Magnetism and Electricity. With 300 Illustrations (Advanced Science Series). Cr. 8vo, pp. 364.

**Hirsch** (B.). Die Prüfung des Arzneimittel, mit Rücksicht auf die wichtigsten Europæischen Pharmacopœn nebst anleitung zur Revision des öffentlichen und Haus-Appotheken, etc., etc. 2d part, pp. 1704.

**Harvey & Davidson.** Syllabus of Materia Medica. A Selection of the more Important Articles and Preparations, giving in compact form a Classified View of the Chief Articles of the British Pharmacopœia in such a way as to indicate their properties, relative value and doses.

**Hughes** (Richard, L.R.C.P.). A Manual of Pharmacodynamics. 3d Ed. revised. Part I.—The Acids, Guaiacum. Cr. 8vo, pp. 387.

**Les Rémèdes des champs,** herborisations pratiques à l'usage des instituteurs, des ecclesiastiques et de tous ceux qui donnant leur soins aux malades. 2d vol., with 150 figures. 32mo, pp. 375.

**Lissonde** (Dr. L.). Du Chloral Hydrate; Étude Chimique, Physiologique et Thérapeutique. 8vo, pp. 108, illustrated.

**Marvaud** (Dr. A.). Étude de Physiologie thérapeutique. Effets physiologiques et thérapeutiques des Aliments, d' Epargne ou Antidéperditeurs, Alcoöl, Café, Thé, Coca, Maté, etc. 8vo, pp. 222.

**Milne** (Alexander). Manual of Materia Medica and Therapeutics. 3d Ed., revised, enlarged and re-arranged by William Craig, M.D. Fcap, 8vo, pp. xii.–325.

**Napier** (James, F.R.S.E.). A Manual of Dyeing, and Dyeing Receipts. 3d Ed.

**Paliard** (Dr.). Recherches thérapeutiques sur la cinchonine. 8vo.

**Pravaz** (Dr. J. C. T.). Recherches expérimentales sur les effets physiologique de l'augmentation de la pression atmosphérique.

**Prunier** (Dr. L.). Étude Chimique et thérapeutique sur les glycerines. 8vo, pp. 63.

**Pupier** (Zénon). Action des eaux de Vichy sur la composition du sang.—Refutation expérimentale de la prétendue anémie alkaline. 8vo, pp. 168.

**Renault** (Dr. J.). De l'Intoxication saturnine chronique. 8vo, pp. 198.

**Riggs** (Rev. Arthur, and Walter T. Golden). An Easy Introduction to Chemistry.

**Sachs** (Dr. J.). Geschichte der Botanik vom 16ten Jahrhundert bis 1860. (History of Botany from the 16th Century to 1860.)

**Sdrorter.** Tests of some Disinfectants by Observation of their Influence upon lower Organisms.

**Springer** (Hahn. Jul.). Die wichtgisten der bis jetzt bekannten Geheimmittel. [The principal quack remedies so far as known.]

**Tony-Blanche.** Recherches expérimentales sur le protoxyde d'azote.

**Vierordt** (Prof. K.). Die quantitative Spectralanalyse in ihrer Anwendung auf Physiologie, Physik, Chemie und Technologie. Mit 4 lith. Tafeln. (Quantitative spectrum-analysis, applied to Physiology, etc., etc.)

**Wilson.** Chemical Notes for Pharmaceutical Students. Including the Chemistry of the Additions to the Pharmacopœia. Post 8vo, pp. 84.

**Manual** of the English Law relating to the Sales of Food, Drink, and Medicines; with a Reprint of the Act of 1875 against Adulteration; with Notes of all Cases decided on the prior Statutes. Edited by a Barrister and Magistrate. (Government Publication.)

*The following forthcoming publications are announced:*

**Cohen.** On Inhalation. By J. Solis Cohen, M.D. 8vo.

**Van Heurck.** A Systematic Catalogue of the Materia Medica Collection of Dr. H. Van Heurck, of Antwerp, is in press. It will form a volume of 250 pages, and will contain an enumeration of 4,000 products.

## BOOKS AND PAMPHLETS RECEIVED.

**Carter.**—A Practical Treatise on Diseases of the Eye. By Robert Brudenell Carter. Macmillan & Co.

**Flint.**—Phthisis; Its Morbid Anatomy, Etiology, Symptomatic Events and Complications, Fatality and Prognosis, Treatment and Physical Diagnosis, in a series of Clinical Studies. By Austin Flint, M.D., etc. Henry C. Lea.

**Ziemssen.**—Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen and Albert H. Buck, M.D. William Wood & Co. (Vols. X. and V.)

**Flint** (Jr.).—A Text-Book of Human Physiology; Designed for the use of Practitioners and Students of Medicine. By Austin Flint, Jr., M.D., etc. D. Appleton & Co.

**Dalton.**—A Treatise on Human Physiology; Designed for the use of Students and Practitioners of Medicine. By John C. Dalton, M.D., etc. Henry C. Lea.

**The Cholera Epidemic** of 1873 in the United States. Government Printing Office.

**Hospital Plans.**—Five Essays relating to the Construction, Organization and Management of Hospitals. Contributed by their Authors for the use of the Johns Hopkins Hospital, of Baltimore. William Wood & Co.

**Griffiths.**—Lessons on Prescriptions and the Art of Prescribing. By W. Handsel Griffiths, Ph.D., L.R.C.P.E., etc. Macmillan & Co.

**Hamilton.**—A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A.M., M.D., LL.D., etc. Fifth Ed. Henry C. Lea.

**Lee.**—Lectures on Syphilis, and Some Forms of Local Disease Affecting principally the Organs of Generation. By Henry Lee. Henry C. Lea.

**Cooke.**—Tablets of Anatomy and Physiology. By Thomas Cooke, F.R.C.S., etc. William Wood & Co.

**Leishman.**—A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By William Leishman, M.D., etc. Henry C. Lea.

**Transactions** of the *Minnesota State Medical Society* for 1875; of the *Medical Society of the State of California* during the years 1874 and 1875; of the *Medical and Chirurgical Faculty of Maryland*, seventy-seventh annual session (1875); of the *Medical Society of the State of Pennsylvania* at its twenty-sixth annual session (1875); of the *American Otological Society*, eighth annual meeting (1875); of the *College of Physicians of Philadelphia*, and of the *Illinois State Medical Society*—twenty-fifth annual meeting.

**Solly.**—Manitou, Colorado, U. S. A.; Its Mineral Waters and Climate. By S. Edward Solly, M.R.C.S., etc.

**Turnbull.**—Tinnitus Aurium, or Noises in the Ears. Second Edition, with Cases. By Lawrence Turnbull, Ph.G., M.D., etc.

**Kemper.**—The Annual Address before the Cincinnati Medical Society. By the Retiring President, and C. Kemper, A.M., M.D.

**Catalogue** of the Officers and Students in Yale College, 1875–76.

**Reynal's** Porte Remède or Medicated Bougies, for the Treatment of Blenorrhœa.

**Stearns.**—Catalogue of Pharmaceutical Products. By Frederick Stearns, Manufacturing Pharmacist.

**Plain Directions** for the Care of the Sick, and Recipes for Sick People. Mutual Life Ins. Co.

**Plain Directions** for Accidents, Emergencies, and Poisons. *Ibid.*

**The West Virginia Medical Student,** Vol. I., No. 1.

**The New Jersey Pharmaceutical Record,** Vol. I., No. 1.

**Buck.**—A Method of Using Medicated Eustachian Bougies. By Albert H. Buck, M.D., etc.

**Hoffmann.**—The Popular Health Almanac for 1876. Edited by Frederick Hoffmann. Steiger.

# CORRESPONDENCE.

### Cosmoline.

DR. D. B. N. FISHER, of Amherst, Mass., writes:

"I wish also to say a word in regard to cosmoline, which you have noticed in your last number. I have used it very extensively for a year past, and am liking it more and more. I have used it as an application to erysipelatous and rheumatic inflammations with marked success, and have also used it in combination with bismuth (℞. cosmoline ℥ ss., bismuth subnit. ʒ ss.) in burns, scalds, and excoriations; also as an application to granular lids in conjunctivitis, having found it to give more relief and permanent benefit in some cases than the application of sulphate of copper or nitrate of silver, so commonly used.

I have used it with nitrate of lead (cosmoline ℥ ss., plumbi nit. gr. v. to xxx.) in hemorrhoids, and as an application to chancres after using severer caustics.

I have also used the fluid form as an injection in gonorrhœa, but have failed (after only three trials) to get any benefit from it.

Our druggists are dispensing large quantities of it, as those parties who have once used it are sure to keep a supply on hand.

### Salicylic Acid.

EDITOR OF "NEW REMEDIES."—DEAR SIR:—In the article on this remedy contained in your journal for April the suggestion is offered that experiments be made with this acid on animals. Before I noticed this suggestion I had made trial of this substance on a mare, which I had been driving but a few weeks. The occasion was this: There appeared on the skin small tubercles, ranging in size from a buckshot to a bullet or hazel nut, which I looked on as an evidence of deranged digestion. Whenever these tubercles came in contact with the harness their surface was abraded, and soon became ulcers, which showed no disposition to heal, even when contact with the harness was prevented. This condition continuing some two or three weeks, with no apparent prospect of getting well, I gave her a bolus of one hundred grains of calomel and two hundred and forty grains of Barbadoes aloes. This produced characteristic bilious evacuations, but was followed by no marked improvement.

About a week after this I noticed in the left eye an irregular, golden hue, when standing in front of her. I thought this was the result of reflected light; but in a few days I discovered pus in the anterior chamber, which, in the course of twenty-four hours, filled the chamber to the lower edge of the pupil. Here was a case of hypopyon. I diagnosticated the case to be a subacute aplastic inflammation of the iris, the result of the condition of the blood. There had been no injury to the eye. The cause was traceable, as I considered, to the condition of the blood. Under this view I gave 100 grains of the sulphate of quinine and 120 of the iodide of potassium. After two days I repeated the dose, with the addition of 20 grains of salicylic acid. I observed no change whatever from the first dose, but a little from the second, and concluded that the slight improvement was due to the salicylic acid. Under this impression I gave her 160 grains of the acid. This was followed by a very decided improvement in the eye, the pus largely decreasing. I then gave another 160 grains within 48 hours, which cleared the eye entirely. A few days after I gave another dose of the same size. This was followed by some disturbance of the appetite, which was not the case after the first two doses. In the meantime the tubercles disappeared in part, and the abraded surfaces began to heal. The color of the iris was of a darker hue than the unaffected eye. I diagnosed the case to be a subacute aplastic inflammation of the iris, giving rise to the secretion of pus instead of coagulable lymph.

The natural color of the iris is a rich hazel. The right eye was not implicated; only a little glairy mucus appeared in the internal canthus.

I was led to a trial of the salicylic acid from the supposition that the blood was in a septic condition, and was the cause of the purulent iritis, and reasoned that the antiseptic properties of the acid would change the condition of the blood, destroy its septic condition, and bring it into a healthy state. The result justified the conclusion, and confirmed the diagnosis.

Since that time there has been a slight return of the hypopyon, but the same treatment proved successful the second time. After its disappearance the second time I gave 30-grain doses of the dry sulphate of iron, which still further improved the condition, so that all the abraded surfaces, which had become unhealthy ulcers, rapidly healed under the application of a solution of the sulphate of copper, one grain to the ounce of water. I attribute, however, the first improvement in the condition of the system, and the cure of the hypopyon, to the salicylic acid.

Very respectfully,

H. CHRISTOPHER, M.D.

ST. LOUIS, Oct., 1875.

# PHARMACEUTICAL SUNDRIES AND NEW INSTRUMENTS.

### A New Thermometer.

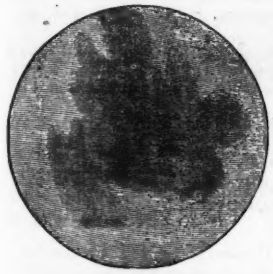
How many physicians there are who, to save a long trip to the bedside of a patient for the purpose of observing the temperature, have adjusted the index of their registering thermometer, and left it with an intelligent relative, with instructions to see it placed *in situ* at the proper time, and then, after five or ten minutes, returned carefully to its case, and on the next visit have discovered that either the light is bad, their eyesight is failing them, or—what has proved to be the case—the relative, to make sure that the thing should be all right when the doctor came, has carefully shook that little bit of mercury down into the bulb either before or after taking the temperature.

It is very well to explain then the *modus operandi* of the index, and the accident will probably never occur again in the same family; but the illustration will have cost the doctor a new thermometer, and the patient and friends may object to rendering any further assistance in his methods of diagnosis. Sometimes, too, an index is shaken down by the jar of a carriage or car, and then, in the absence of any one else, the thermometer is blamed for the result. Several ways have been resorted to for preventing this descent of the index; an early one of German origin consisted of a complete turn in the tube, which had then to be inclosed in a still larger one. Still more recently, the tube has been drawn out just above the bulb to a lumen so fine, that the index is stopped by the friction of passing it. This, however, does not always answer, and it has been reserved for a journeyman tailor of this city to invent a way for arresting the index, which has so far succeeded perfectly. His comrade, a thermometer maker, who told him of the defect in the ordinary thermometer, shares with him the patent, and manufactures the instrument. The improvement is very simple, and consists, as shown in the annexed cut, in giving the tube a complete twist.

### "Milk of Magnesia."

Our attention has been called to this solution of the hydrate of magnesia, the process for the manufacture of which was patented in 1873 by Mr. C. H. Phillips, manufacturing chemist, of this city, but which is less known by physicians and pharmacists than its merits deserve.

While the calcined and carbonate of magnesia have been among the most agreeable forms of antacids and laxatives which we have possessed, for some reason their use, and especially that of the former, has been decreasing of late years. The comparative insolubility of these substances, with perhaps the feeling of uncertainty in regard to their purgative action, has led to their abandonment for this purpose, and the fear that their continued use as antacids would lead to concretions with intestinal mucus, etc., have operated in the other case. However it may be, there is no remedy which is more convenient for use by infants and feeble persons, or which deserves to be employed more commonly in the acid diarrhœas of infants during the warm weather. As an antidote to acute arsenical poisoning, it has frequently been recommended, and is even more valuable, it is said, in poisoning by acids and by phosphorus.



Nearly all commercial samples of magnesia (and its carbonate) have a peculiar grittiness, which is particularly noticeable upon the tongue and palate. This grittiness is owing to a semi-crystalline state of the particles of magnesia, which are in consequence thereof less soluble than they would be if the precipitate had retained its gelatinous character.

The process by which the "Milk of Magnesia" is made appears to accomplish all that could be desired in the way of finely dividing and completely suspending the remedy; the only care necessary for its preservation being to protect it from a freezing temperature. Its almost perfect tastelessness fits it especially for use by children. It is also a pleasant dentrifice, and can well take the place of the bicarbonates of potassa and soda in the treatment of acid indigestion and the uric acid diathesis. As an evidence of its perfect solution, the adjoining illustrations of the microscopical appearances of this, as compared with one of the ordinary preparations, will prove interesting, a magnifying power of two hundred and fifty diameters having been the one employed.

### A Modification of Camman's Stethoscope.

About two years ago, Mr. Wm. F. Ford, the well-known instrument maker, of New York, introduced a modification of the "Camman" stethoscope, which has since been used by numbers of physicians in the hospitals and dispensaries of this city, and by some who are engaged in examining applicants for insurance, and the verdict has thus far been in its favor. As may be seen by the illustration, the rigid metallic tubes have been abandoned, and the ear-pieces are attached directly to the extremities of the elastic tubes, which have been proportionately lengthened. To hold the ear-pieces in place a wire spring has been added, and the result has been a great improvement as regards the portability of the instrument, while its acoustic properties are, in the opinions of those who have tried it, quite as good as those of

the original instrument. No small item for consideration is the lessened expense, which is, we believe, about half that of the one in common use.

## NEW PATENTS AND LAWS.

### COMMISSIONER'S DECISIONS.

*Nov.* 2, 1875.

Appeal from the Examiner of Trade Marks in the matter of the application of Lewis N. Green for the registration of a Trade Mark. Decided Sept. 27, 1875.

This appeal is taken from the decision of the Examiner of Trade Marks refusing to register the words "German Sirup." Decision reversed.

### TRADE MARKS REGISTERED IN U. S. PATENT OFFICE.

*Certificates bearing date Nov.* 2, 1875.

3,116. **"Painoline."**—Orrin B. Mansell, Lynn, Mass. Application filed Oct. 18, 1875.

3,121. **"Malarion."**—Snyder & Gue, Decatur, Ill. Application filed Oct. 12, 1875.

3,124. **"Oxygenated Air."**—Dr. Heath & Co., Washington, D. C. Application filed Sept. 25, 1875.

*Certificates bearing date Nov.* 16, 1875.

3,135. ——— Hostetter & Smith, Pittsburg, Pa. (re-registration). Application filed March 29, 1875. "A drawing, engraving, or picture, representing the mythical battle of St. George and the Dragon, a shield-shaped figure in dark back-ground, the engraving or bust of a venerable appearing man with white flowing beard, and facsimile of our signature in two places."

3,140. ——— No. 1. William Swaim, Philadelphia, Pa. Application filed Oct. 23, 1875. "A figure bounded by convex curved lines top and bottom, and by concave lines on the ends, bearing white letters on a black or other dark ground, the word 'Swaim's,' and the lower

part in similar letters the word 'PANACEA,' and between said part the word 'CELEBRATED,' in a horizontal line in black or other dark letters."

3,141. ——— No. 2. Application filed Oct. 23, 1875. "The representation of a bottle, upon which are the words 'SWAIM'S PANACEA' in two places, and a fanciful label, upon which is a portrait and ornamental bank-note work, the whole forming one device."

3,142. ——— No. 3. Application filed Oct. 23, 1875. "The representation of three bottles in a row, the one on the left hand bearing the word 'SWAIM'S;' that in the middle bearing the word 'Panacea,' and that on the right hand the word 'Philada,' and above the bottles is the word 'SWAIM'S,' and beneath them the word 'PANACEA.'"

3,143. ——— No. 4. Application filed Oct. 23, 1875. "A device engraved on a steel plate in ornamental, engine-turned, bank-note work, the form being a parallelogram with a curved cap-piece. The said parallelogram bears at its top the word 'SWAIM'S,' and at the foot the word 'Panacea,' and in its central part is a finely engraved portrait of William Swaim."

*Certificates bearing date Nov.* 23, 1875.

3,150. **"Greenwood Asthmal Cure."**—Elizabeth E. Chamberlain, Portland, Me. Application filed Oct. 25, 1875.

3,153. **"Pain Killer."**—Perry Davis & Son, Providence, R. I. (re-registration). Application filed July 25, 1875.

3,164. **"Swift's Stomach Bitters."**—Arnold Koch, Pittsburg, Pa. Application filed Oct. 29, 1875.

*Certificates bearing date Nov.* 30, 1875.

3,174. **"Eppley's Medicated Whiskey."**—Francis M. Eppley, Newark, N. J. Application filed Nov. 13, 1875. The foregoing words in conjunction with the letters E. M. W. inclosed within the star-like figure.

## LABELS REGISTERED IN THE U. S. PATENT OFFICE.

*Certificates dated Nov.* 2, 1875.

363. **"Carell's Aromatic Wine-Bitters."**—S. F. Carell, New York, N. Y. Application filed Oct. 21, 1875.

365. **"Glycerine Camphor-Cream."**—Rutger L. Drake, Troy, N. Y. Application filed Oct. 25, 1875.

370. **"Sachet Powders.—T. Metcalf & Co., Boston."** Theodore Metcalf & Co., Boston, Mass. Application filed Oct. 29, 1875.

*Certificates dated Nov.* 9, 1875.

377. **"Pure Palm Soap, made in Liberia, Africa."**—Edward S. Morris & Co., Philadelphia, Pa. Application filed Nov. 3, 1875.

378. **"Weaver's Florida Water."**—James B. Weaver, Philadelphia, Pa. Application filed Nov. 5, 1875.

*Certificates dated Nov.* 16, 1875.

380. **"For Single Box $1 00. This Irish Salve is Warranted to Cure,"** etc.—John L. Fitzgerald, Spencer, Mass. Application filed Nov. 5, 1875.

381. **"Mitchell's Centennial Cologne."**—George E. Mitchell, Lowell, Mass. Application filed Nov. 10, 1875.

386. **"Mist-. Limonis Comp."** Relief Manufacturing Co., New York, N. Y. Application filed Aug. 28, 1875.

387. **"Reichardt's Salicylic Horse Cure."**—F. Alfred Reichardt, New York, N. Y. Application filed Oct. 21, 1875.

392. **"Upham's Malarial, or Fever and Ague Sachet."**—Samuel C. Upham, Philadelphia, Pa. Application filed Nov. 11, 1875.

393. **"E. W. Wallace's National Approved Throat Remedy."**—E. W. Wallace, Saline, Michigan. Application filed Nov. 8, 1875.

*Certificates dated Nov.* 23, 1875.

394. **"That Liniment. Good for Man or Beast."**—Garden & Miner, Belmont, Wis. Application filed Oct. 20, 1875.

395. **"Gruman's Genuine English Mustard."**—J. B. Gruman & Co., Westwood, N. J. Application filed Nov. 15, 1875.

397. **"Lauterbach's Cod-Liver Oil, with Churchill's Hypophosphites and Phosphate of Lime."**—Robert Lauterbach, Baltimore, Md. Application filed Nov. 5, 1875.

399. **"De Bense's Spanish Iron Drops."**—De Bense, Brooklyn, N. Y. Application filed Nov. 20, 1875.

400. **"Colby's Asthma Remedy."**—Leonidas H. Bush, Des Moines, Iowa. Application filed Nov. 20, 1875.

401, 402, 403, 404, 405. **"Elixir Peruvian Bark with Protoxide of Iron."**—Billings, Clapp & Co., Boston, Mass.

406. **"Calenduline—a Glycerine Jelly for the Toilet."**—Frederick A. Brown, Indianapolis, Ind. Application filed Nov. 20, 1875.

## NEW PATENTS.

*Nov.* 2, 1875.

169,348. **A Chemist's Test Apparatus.**—C. Fahlberg, New York, N.Y. "A chemist's test apparatus consisting of a series of bottles placed on a rotating table, the said bottles connected by pipes to a central pipe, which discharges in a receiver. The filtering process is hastened by an air-pump which is connected to these bottles by said pipes, and regulated by stop-cocks."

169,362. **Water Filter and Purifier.**—Adolph Le Fillier, Brussels, Belg. [Filed July 10, 1875.] The water first enters a vessel into which slacked lime has been introduced, and falls upon a button attached to a spiral spring arranged in the bottom of the vessel, to agitate the milk of lime. It then passes into a filtering vessel having a number of cylinders, each composed of a metal tube, perforated and surrounded by washers of felt compressed between plates by means of a screw-nut.

169,384. **Shield Attachment for Bulb Syringes, Atomizers, etc.**—Eli T. Starr, Philadelphia, Pa., assignor to S. S. White, same place. [Filed June 19th, 1875.] "The detachable shield adapted to the shape of the palm of the hand, to clasp the neck of the bulb, so that the compression force is applied on the side of the bulb opposite that against which the shield rests."

169,500. **Drying Apparatus.**—T. Webber, Chicago, Ill. [Filed Sept. 18, 1875.] The rods distribute the weight of the pans over the pipes. The endless feeding-belt and the transferring-roller carry the pans into the rods.

169,514. **Electrical Induction Apparatus.**—Robert K. Boyle, Brooklyn, N. Y. [Filed March 16, 1875.] "In a series of induction-coils, secondary helices connected to one conductor. Primary helices alternately brought into action so as to give a strongly induced current."

169,529. **Galvanic Batteries.**—C. Duhem, Denver, Col. [Filed July 9th, 1875.] "A supplementary electrode capable of being connected with the positive plate in the liquid, for the purpose of increasing the quantity of the current."

169,540. **Empirical Prescription for the Cure of Catarrh.**—J. H. Harvey, Memphis, Mo. [Filed October 3d, 1874.] "The medical compound for the cure of catarrh, herein described, consisting of nitrate of potassa, chlorate of potassa, golden seal, common salt, and gum camphor, in about the proportions herein specified."

169,591. **Processes for Preserving Fruits.**—Frederick H. L. C. Succ, Neufchatel, Switz. [Filed Oct. 20, 1875.] "The method herein described of preserving fruits by the employment of sugar and alcohol, either alone or in connection with other ingredients, substantially in the manner herein set forth."

169,631. **Water Filter.**—E. S. Farson, Philadelphia, Pa. Filed April 26, 1875.] "A filter with conical slip cover over the water receptacle. The chamber is divided by a vertical partition into central and annular surrounding portions, the two communicating by a series of small holes. The bottom of the central chamber has a concavo-convex plate, with perforations punched so as to give upturned edges in the convex side to prevent choking. The tube has a disk at the bottom, and serves the purpose to maintain a column of water and to allow escape of air."

*Nov.* 9.

169,652. **Liquid Measures.**—Charles G. Morgan, Bristol Station, Ill. [Filed Aug. 12, 1875.] "The oil or other liquid is contained in the tank, and the required amount, determined by adjusting the cover, is carried from the massed chambers by the spur-wheels, and forced through the tube and out of the nozzle into a vessel placed to receive it. A nozzle stopper is placed upon a yielding arm attached to the side of the tank, for the purpose of closing the mouth of the nozzle."

169,671. **Perfuming and Disinfecting Apparatus.**—Carl L. C. Battmann, Hoboken, N. J. [Filed October 17th, 1875.] "The hollow pan contains water fed from the reservoir and is situated immediately over the flame of the lamp. The perfuming powder to be decomposed is spread upon the top of this hollow pan so that the water in the pan, on which the powder is placed, when heated, will evaporate the essential oils. The steam generated in the reservoir is carried off through a pipe into the condenser."

169,727. **Reagents for Testing the Strength of Vinegar.**—Charles Peters, Mechanicsville, Va., assignor to Charles Borse & Co., New York, N. Y. [Filed Sept. 4th, 1875.] "A standard liquid consisting of ammonia, alcohol, litmus, and water, which, losing its blue color upon the addition of vinegar, indicates, on the scale of the acetometer illustrated, the grain of the sample."

169,857. **Apparatus for Filtering Liquids.**—Thomas R. Sinclaire, Brooklyn, N. Y. [Filed Aug. 10, 1875.] "To the inner surface of the walls of a filter are attached ledges, or deflectors, which are pliable, flexible, or adjustable, and which may be provided with counter ledges. The filter has also diaphragms provided with eccentric passages; the liquid, by above means, is caused to percolate the mass of filtering material."

*Nov.* 16.

169,925. **Composition for the Destruction of Vermin.**—James G. Steele, San Francisco, Cal. [Filed August 5th, 1875.] "A composition of matter consisting of wheat, sulphate of strychnine, distilled water, acetic acid, corrosive sublimate, granulated sugar, and wheat flour, all substantially as described, and for the purpose specified."

169,949. **Ointments.**—Jerome C. Brown and Sarah W. Brown, Willoughby, Ohio. [Filed Sept. 26th, 1874.] "A compound of glycerine, arnica, woody night-shade, and nutmeg, in about the proportions, and for the purpose specified."

169,992. **Paper Boxes.**—David L. Hawkins, Elizabeth, N. J. [Filed May 28, 1875.] "As a new article of manufacture, a pill-box having printed on the periphery of the cover, or on the periphery of the body of the box, twelve numbers, corresponding to twelve hours of a day, which numerals are arranged at regular intervals apart around the box, and a pointer to indicate the hour for taking a dose of medicine, substantially as described."

*November* 23*d.*

170,167. **Druggists' Filters and Funnels.**—Abram E. Garrison, Newton, Kans. [Filed Sept. 16, 1875.] "Between the movable strainers a chamber is formed for the reception of filtering material."

170,182. **Syringes.**—William Molesworth, New York, N. Y. [Filed July 12, 1873.] "The double canula to which the syringe-bulb is attached, is of flexible metal, and made by inserting a longitudinal diaphragm in the ordinary tube."

170,185. **Pill-Coating Machines.**—A. F. W. Neypaber and W. F. A. Neynaber, New York, N. Y. [Filed Oct. 9, 1875.] "The dipping-needles are bent at the blunt end, and received between two boards, one of which is, of course, perforated to receive the needles. A third board is perforated and passed over the needles, and is used to push off the pills which are upon the needle-points after being dipped in the coating material."

170,217. **Limb-Receivers.**—H. R. Allen, Indianapolis, Ind. [Filed Feb. 24, 1875.] "The double jacket does not extend over the bottom, and an additional section is used for a more complete adjustment to the limb to be treated."

170,246 **Carboy.**—Alex. H. Fatzinger, New York, N. Y., assignor to himself and J. McFarlane, New Bergen, N. J. [Filed Oct. 29, 1875.] "The carboy is protected by box and cover. The neck of the carboy passes through a centrally perforated removable partition. The cover has four downward projecting pins, passing between the horizontal partition at the corners and the casing. The case has three cleats in opposite sides, so that the handle may be placed vertically or horizontally."

170,273. **Trusses.**—Hiram A. Kimball, Philadelphia, Pa., assignor to Benjamin C. Everett, same place. [Filed Nov. 5, 1875.]

170,286. **Compositions for Infusions and Beverages.**—Wolfgang A. Martin, Pittsburg, Pa. [Filed Oct. 5, 1875.] "A composition containing figs and the fruit of the ecretoma substantially, and for the purpose specified."

170,316. **Adjustable Graduated Measures.**—Thos. B. Young and Silas A. Davis, Livermore, Ky., assignors of one-third of their right to John A. Moore, same place. [Filed May 22, 1875.] "As a new article of manufacture, a graduated measure composed of two or more telescopically-connected sections, the lower one of which has a permanent bottom, the sections being provided with interlocking, laterally-branched grooves and pins, all substantially, as specified."

170,360. **Vegetable Parchment.**—A. G. Fell, New York, N. Y., assignor to himself, Wm. H. Phelps, and W. H. Smith, same place. [Filed March 31, 1875.] "Treat paper with sulphuric acid. Wash, subject for three hours to bath (heated to 180°) of water, eight hundred parts; glue, eighty parts; tungstate of soda, two to four parts; acetate of lead, eight parts; glycerine, five parts. Immerse suddenly in pyroxyline solution at normal temperature. Dry and calender."

170,424. **Apparatus for the Use and Recovery of Vaporized Solvents.**—James R. Whiting, New York, and William A. Lawrence, Springfield, L. I., N. Y. [Filed Aug. 14, 1875.] "By means of the supplemental condenser, vapors of the solvent liquid are collected and saved from the extractor and the holding reservoir."

*November* 30*th.*

170,466. **Trusses.**—Stephen M. Bayard, Iona, Mich. [Filed April 7, 1875.] "A peculiarly arranged compression buckle adjusts the pressure of the pad."

170,513. **Ink-Powders.**—William A. Bonney, Hyde Park, assignor to Daniel Swett, Wakefield, and Samuel D. Niles, Reading, Mass. [Filed Aug. 6, 1875.] "An ink-powder, composed of extract of logwood, bichro-

mate of potash, prussiate of potash, gum-arabic, and copperas, in or about the proportions herein set forth."

170,592. **Perfume Fountains.**—Emil Rath, Hoboken, N. J. [Filed Nov. 4, 1875.] "The circumferential groove, and the outlet shown, permit the liquid ascending between the plugger and the barrel to return to that in the bottle."

170,644. **Spectacle-Frames.**—John W. Stewart, Woodville, Texas, assignor of two-thirds his right to James K. Durham and John N. Goolsbee. [Filed July 15, 1875.]

## NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, providing they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lay over until the next issue.*]

J. G., of Mt. Vernon, has requested us to furnish the formula for preparing the *Syrup of the Phosphates of Iron, Quinia and Strychnia*, as used in the public hospitals of this city. The following is the process adapted to a smaller scale:

Take of sulphate of iron, 5 troy ounces; phosphate of sodium, 6 troy ounces; sulphate of quinia, 771 grains; strychnia, 11 grains; sugar, 42 troy ounces; sulphuric acid, phosphoric acid, water of ammonia and water of each a sufficient quantity.

Dissolve the sulphate of iron and phosphate of sodium each in 4 pints of water, filter the solutions and mix them. Collect the precipitated phosphate of iron upon a filter and wash it until it is free from sulphate of sodium (or until the washings give at most only a faint opalescence with barium chloride). Dissolve the sulphate of quinia in dilute sulphuric acid, precipitate the solution with ammonia and wash the precipitate with cold water, until free from sulphate of ammonium.

Prepare a concentrated solution of phosphoric acid, by dissolving 12 troy ounces of crystallized tribasic phosphoric acid, or the same amount of pure glacial acid previously converted into the tribasic variety. Add to the pulpy phosphate of iron contained in a suitable vessel enough of this acid to dissolve it; then add the quinia, also in a moist state, and again add phosphoric acid, until solution has taken place. Rub the strychnia in a mortar into a smooth paste with a little water, add it to the solution, and if necessary, a little more acid, to completely dissolve it. Now allow the liquid to stand for 24 hours, during which time, if glacial acid has been originally used, a small quantity of basic phosphate may be deposited, and filter the solution, which should measure about 32 fluid ounces. Then add 42 troy ounces of sugar, dissolve by agitation, without heat, and make the final bulk measure 82½ fluid ounces. This syrup contains in one fluid drachm: 2 grains phosphate of iron; 1 grain quinia, and $\frac{1}{10}$ grain strychnia.

It is very important that the phosphoric acid should be as nearly as possible the pure tribasic variety; for, as is well known, the commercial glacial acid is not only often very impure, but it is almost impossible to insure its complete conversion into the tribasic form, especially with the officinal process. The consequence of using such an acid is generally a more or less abundant deposit of basic phosphates, thus making the preparation weaker than it should be. Crystallized phosphoric acid, of a high degree of purity may be readily obtained, or phosphorus itself may be converted into phosphoric acid by means of nitric acid (U. S. Ph. or Prof. Markoe's process). Concentrated solution of phosphoric acid, containing from 40 to 60 per cent. of anhydrous acid, may be obtained in the market, and it is only in this condition that it can be kept free from fungous growth. We have for a number of years been in the habit of keeping our acid, in large quantities, in solution of such a strength, that 2 fluid ounces of it, added to 14 fluid ounces of water, produce one pint of the diluted phosphoric acid of the pharmacopœia.

**Dr. W. R. R., (Stamford, Ct.).**—"*Papier Fayard*" is indeed a different preparation from that given on page 89 of last January's number of this journal. The composition there given is known under the name of *Charta antirheumatica irritans, Papier dérivatif antirheumatique.* There are several popular plasters in use, of nearly the same composition, under the name of *Papier chimique contre les douleurs*, one prepared by Fayard and Blayn, another by Mrs. Poupier. The mode of preparation is as follows: 30 parts of cut garlic are digested in 500 parts of linseed oil, to which are added 500 parts of oil of turpentine, 50 of acetate of lead, 30 of yellow ochre and 15 of red lead. This mixture is applied to tissue paper, and after drying there is spread upon it a plaster prepared in the following manner: 200 parts of olive oil are heated in a vessel until vapors begin to rise and 100 parts of red lead are added under constant stirring; when effervescence has ceased, the vessel is removed from the fire, the contents briskly stirred until covered with a whitish foam, and finished by the addition of 6 parts of yellow wax.

## PRESCRIPTIONS AND FORMULÆ.

**Oleo-Paraffin, a Substitute for Lard.**—Mr. Jas. F. Babcock proposes the following composition as a substitute for lard in cerates and ointments, as it has the same melting point, and contains a larger amount of olein than lard of the same consistence:

| | |
|---|---|
| Lard Oil | 15 parts. |
| Paraffin | 3 " |
| Wax | 1 part. |

The product has the additional advantage of not becoming rancid.

Proportions for *Simple Ointment:*

| | |
|---|---|
| Oleo-paraffin | 8 parts. |
| Wax | 2 " |

Proportions for *Simple Cerate:*

| | |
|---|---|
| Oleo-paraffin | 8 parts. |
| Wax | 4 " |

**Deodorized Cod-liver Oil.**—The following is Carlo Pavesi's formula:

| | |
|---|---|
| Cod-liver Oil | 1000 parts. |
| Ground roasted Coffee | 50 " |
| Animal Charcoal | 25 " |

Place the ingredients in a flask, which is to be well closed, and digest on a water-bath during the space of one hour; then set it aside for three days, occasionally shaking the contents, and filter. This preparation has a peculiar coffee-flavor, and is quite pleasant to take.

**Chloral as a Solvent.**—M. Fairthorne suggests the subjoined formulæ, based on the considerable power as a solvent which chloral possesses. Glycerin affords a convenient agent for forming solutions with chloral and the alkaloids, and the following will be found, when properly combined, to produce permanent and elegant preparations

**Glycerole of Saccharate of Lime.—**

Lime, slaked..... 20 gm. or 309 grs.
Sugar, pow'd..... 40 gm. or 618 grs.

Mix, introduce into a flask, and pour upon it

Water, distilled.....200 gm. or 3086 grs.

Set aside for one day, shake frequently and filter. To the filtrate add

Glycerine.....40 gm. or 618 grs.,

and evaporate the whole on a water-bath, until the residuary liquid measures 100 cc. or 3 fl. oz. and 187 minims. The resulting product is nearly colorless, of a spec. gr. of about 1.280 at 15° C.—100 cc. contain 7.716 gm. lime, or 56.55 gm. saccharate of lime; or 1 fl. oz. contains 35 grs. of lime, or 256 grs. saccharate of lime.

**A Vehicle for Chloroform.**—Prof. Jaillard says, that in order to prevent the irritating action of chloroform on the mucous membrane of the mouth, it is only necessary to administer it in milk, which, if wished, can be sweetened.—*Amer. Practitioner*, September, 1875.

**Chloral Glycerite of Morphia and Camphor.—**

℞ Morphia..... 5 gr.
Chloral } ..... each 1 gr.
Camphor }
Glycerin..... ½ fl. oz.
M. sec. art.

**Lotion of Chloral and Iodine.—**

℞ Iodine..... 20 gr.
Iodide of Potassium..... 6 gr.
Glycerin..... 1 fl. oz.
Chloral hydrate..... 2 dr.
M. sec. art.

Chloral can also be combined with collodion, in which it dissolves after the addition of a few drops of alcohol.

A solution consisting of nine parts of hydrate of chloral and three of water, is capable of dissolving the following substances to the extent named:

One grain of morphia is dissolved by a portion of the liquid containing twelve grains of chloral hydrate; one grain of veratria by a portion containing five grains; and one grain of atropia by a portion containing twenty grains. These substances should be mixed in a state of powder, with the solvent, and heated by means of a water-bath, with occasional agitation. The solutions thus made are in a convenient form for employment, either alone or when mixed with oils, ointments, or with glycerine. Camphor, too, is finely dissolved by them.

**Ointment of Chloral and Veratria.—**

(Corresponding in strength to Ung. Veratriæ, U.S.P.)

℞ Veratria..... 10 gr.
Chloral hydrate..... 3j.
Water..... 6 drops.
Lard ointment..... ½ oz.
M. sec. art.

**Chloral Glycerite of Veratria.—**

℞ Veratria..... 5 gr.
Chloral hydrate..... 1 dr.
Glycerin..... ½ fl. oz.
M. sec. art.

**Chloral Glycerite of Morphia.—**

℞ Morphia (powdered)..... 5 gr.
Chloral hydrate..... 1 dr.
Glycerin..... ½ fl. oz.
M. sec. a

**Ginger-Beer Powders.**—The London *Chemist and Druggist* says that a powder for making ginger-beer, to be sold in single packets, may be prepared thus:

Ginger, bruised..... ½ oz.
Cream of tartar..... ¾ oz.
Ess. lemon..... 4 drops.

Mix. Some sugar may be added "if it be thought desirable to make the packet look bigger." For use this powder is to be added to a gallon of boiling water, in which dissolve 1 lb. of lump sugar, and when the mixture is nearly cool two or three tablespoonfuls of yeast are to be added. The mixture should be set aside to work for four days, when it may be strained and bottled.

**Cold Cream with Borax.**—The following formula is given by the same journal in answer to an inquiry from a correspondent:

White wax..... 1 oz.
Oil almonds..... 4 ozs.
Rose water..... 2 ozs.
Borax..... ½ dr.
Otto of rose..... 5 drops.

Dissolve the borax in the rose water and (by the aid of heat) the wax in the oil. While still warm, mix gradually in a mortar, previously warmed. Add the otto, stirring constantly.

## ITEMS.

**College of Pharmacy of the City of New York.**—A conversational meeting of the members of the College was held on Dec. 16th, at 8 P.M., at their rooms in the University building. Mr. Gustavus Ramsperger read a translation of the new law concerning pharmaceutical examinations in the German empire, which went into operation on Oct. 1, 1875. Its main features were fully discussed, and although a majority of its provisions are inapplicable to this country, chiefly owing to the want of a central supervisory power, yet suggestions were thrown out as to the propriety of adopting certain parts thereof in a modified form. Especial stress was laid upon the fact, that sooner or later it will be found absolutely necessary to insist upon a higher standard of preliminary education for those who wish to enter the profession or who desire to practise it, and to make the examinations—wherever such exist—more of a practical nature.

Prof. P. W. Bedford exhibited some interesting specimens, among them two full grown musk-deer, male and female, as well as a number of views and diagrams with the aid of the stereopticon.

A meeting of the Board of Trustees of the College was to take place on Jan. 6th, 1876, at 7½ P.M., and a meeting of the members of the College on Jan. 20th, at 8 P.M.

**The Ivory Nut** (the kernel of the phytelephas macrocarpa), or vegetable ivory, is in such demand in the German market that its price in Carthagena, the port to which it is brought from the forests bordering the rivers Atrato and Magdalena, has nearly doubled within a short time. The exports of the present year are estimated at about 325 tons, against 275 in 1874.

**The Coffee Crop** in Dominica, which, before 1833, was of superior quality, and large enough for considerable export, has been so destroyed since then by the white coffee leaf-miner (cemiostoma cofeelmum mann.) that only enough for home consumption can be raised. The Brazil crops have been lessened one-fifth by the ravages of the insect.

**A Lady** chemist, named Miss Ellen H. Swallow, performed the greater portion of 450 analyses for the Massachusetts State Board of Health during the year 1874.

**Nostrums.**—The President of the British Pharmaceutical Conference has recommended the appointment of a commission who should be informed as to the different ingredients composing the so-called patent medicines, which are, in reality, not patented, but secret. This, he says, will be for the benefit of the public health, many of the articles now sold being injurious, and their sale extended through false statements.

**East India Peanuts.**—According to the Madras *Mail* there has been an extraordinary increase this year in the export of peanuts (arachis hypogæa) from Pondicherry, as compared with former years. In 1874 the total quantity amounted only to 30,000 bags of 100 lbs., but during the first seven months of 1875 it reached 180,000 bags, of which about two-thirds went to France, and the remainder to England.

**Milligrade Thermometers.**—J. Williams proposes to divide the distance between the freezing point of mercury (— 40° C.) and its boiling point (360° C.) into 1000 parts; this would give the freezing point of water at 100°, and its boiling point at 360°; 15 of these degrees are equal to 2° C.

**Magnesiline.**—A preparation of citrate of magnesia, said by the makers, Messrs. Kinsmore & Co., of Leamington, England, to contain sixty per cent. of citrate of magnesia, is among the English pharmaceutical novelties.

**A New Association.**—One of the results of the recent meeting of the American Pharmaceutical Association in Boston, has been the formation of a society for social and charitable purposes, called the "Boston Druggists' Association." Mr. Theodore Metcalf is the first president.

**The Growth of Olives** in Spain occupies one-thirtieth part of the whole land under cultivation.

**Peruvian Nitrate of Soda.**—Peru possesses at present one hundred and thirty-one factories, turning out about 300,000 tons of crude sodium nitrate of 95-96 per cent. The iodine, which is contained in the "caliche," or native chili—saltpetre in the form of iodates—is extracted in some of the establishments, especially in the Tarapaca company's works, which produce annually about 100,000 lbs..

**Sir Charles Wheatstone,** the celebrated English physicist, died on the 21st of October, 1875. He was eminent as an investigator, an inventor in the field of electricity, and was the originator of the stereoscope.

**Dr. Joh. Müller,** Prof. of Natural Philosophy in Freiburg, i. B., died October 4, 1875. He is chiefly known as the translator and editor of Pouillet's Treatise on Physics.

**M. Briet,** the inventor of the syphons for aërated waters, so largely employed in this country, as well as in Europe, died recently at Vernon, in France. It is a satisfaction to know that he realized a handsome fortune from his invention.

**"The American Journal of Chemistry."**—The publication of this journal has been suspended.

**New Pharmaceutical Journals.**—Two new journals devoted to Pharmacy have recently appeared in Europe, viz., the *Journal de Pharmacie*, which is to be published fortnightly at Geneva, and is in French, the only other Swiss pharmaceutical journal, the *Schweitzerische Wochenschrift*, being the organ of a society, and published in German. The second, *De Pharmaceut*, is to be published at Groningen, in Holland, as a "Weekblad voor Pharmacie en vernante wetenschappen." Each of the journals consist of four small quarto pages, besides the advertisements. *The New Jersey Pharmaceutical Record* is the latest American periodical—we were about to say, of this character, but it might be called by a variety of names if the character of its contents were to give an indication of the title.

**French Iron Pyrites.**—France consumed during the year 1874 about 180,000 tons of iron pyrites for the manufacture of sulphuric acid. Nine-tenths of this quantity are obtained in France; one variety of the ore contains 46–48% sulphur, another contains 50–53%.

**A New Source of Drugs.**—The Chamber of Commerce have addressed a memorial to the Secretary of the Navy, in favor of a survey of the region watered by the largest branch of the river Amazon, the upper Madeira, under the direction of Mr. James Orton. The memorial sets forth that "this region has an area of 400,000 square miles, and it has been partially traversed by Mr. Orton before;" also "that there are immense supplies of timber, valuable both for construction and ornament, of drugs especially, including Peruvian bark, peculiar to that favored country."

**Monsieur Desportes** has recently bequeathed to the French Academy of Medicine 1,200*l.* sterling, to found an annual prize for the author of the best therapeutical work of the year.

**Daniel Hanbury, M.D.**—From a recently published memoir of Daniel Hanbury, written by his friend and coworker, Professor Flückiger, it appears that the University of Munich in 1872 conferred upon him the honorary degree of Doctor of Medicine. Daniel Hanbury never used the title.

**Elixir of Life.**—A French chemist has discovered the elixir of life. It is sour buttermilk. The lactic acid in this dissolves the products of organic combustion, which, as ossification and calcareous degenerations, are the main agents in the death of the aged.

**A Singular Accident.**—The laboratory of a pharmacien named Martin, at Allanche, suffered a singular accident lately, which may serve as a caution to others. In that laboratory was a tin containing about 500 grammes of phosphorus. This was kept usually on the floor, but an apprentice had placed it on an upper shelf. Somehow, either by evaporation or accident, this tin lost all its water, and, consequently, one fine day the phosphorus took fire. The laboratory and pharmacy were soon filled with suffocating vapors, the cause of which was not traced until afterwards. Engines arrived and pumped into the laboratory, and the fire was at length overcome. It is remarked that had the accident occurred in the night, Mr. Martin must have been suffocated, his sleeping apartment being just over the laboratory.

**Opium Smuggling.**—Among the recently discovered methods of smuggling opium, the *Alta California* gives the following: It has been hidden in false bottoms of coffee kettles, used on the voyage; in tinner's pots, which are brought ashore on the backs of passengers; in old pieces of timber, about six inches wide, of the same depth and four feet long, in which pieces are cut out just large enough to hold five-tael cans of opium. These timbers are generally brought ashore by some of the crew for the purpose of leading the officers to believe that the wood has been brought from the ship and is of no further use. Another plan was to bring a carpenter's horse on to the wharf, until one day some inquisitive inspector took a notion to carefully examine the horse, and, sure enough, had his trouble rewarded by finding slides in the legs, in which taels of opium had been stowed away. Still another mode was to have tin boxes fitted around the calf of a man's leg, which were filled with opium.

**Communications have been received** from Dr. John B. C. Gazo, La Fourche Parish, La.; Dr. D. B. N. Fish, Amherst, Mass.; Dr. H. Roberi, St. Landry Parish, La.; Dr. George Riley, New Buffalo, Mich.; Dr. W. Robert Rend, Stamford, Ct.; Dr. H. Christopher, St. Louis, Mo.; Dr. E. R. Squibb, Brooklyn, N. Y.; W. C. Collings, Cicero, Ind.; G. W. Sandford, M.D., Parisville, Ct.; Z. C. Williams, Mt. Enterprise, Rusk Co., Tex.